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Result
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Maximum Match 100%
Listing first 45 summaries
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Perfect score:
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          110
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Copyright (c) 1993 - 2000 Com
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AAR98950
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AAR63249
AAW16669
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Insulinotropin (GL
Insulinotropin (GL
Tetradecanoylated
Glucagon-like pept
Target peptide (GL
Peptide used in tr
Modified Glucagon
Glucagon-like pept
Human glucagon-lik
Amino acid sequenc
An insoluble gluca
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| -35). How no like pep utant peptite table alucagon li luble glucotropin (G d Glucagon li like pep lucagon li like pep no like no like pep no like | GLP-1 derivative. Insulinotropin der Insulinotropin (GL Glycogen Like Pept GLP1(7-35). Not s |

ALIGNMENTS

RESULT AAR45437

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AAR45437;

AAR45437 standard; protein; 28

A

Insulinotropic; activity; enhancing insulin activity; treatment;

Insulinotropin derivative 27-JUN-1994 (first entry)

Claim 3; Page 20; 32pp; English New derivs. of glucagon-like peptide 1 and insulinotropin - used for enhancing insulin action in a mammal, partic. by iontophoretic admin ${\bf c}$ WPI; 1994-007457/01. 14-APR-1993; Synthetic. Type Andrews GC, (PFIZ) PFIZER INC. 15-JUN-1992; 23-DEC-1993. W09325579-A. II diabetes. Daumy .GO, 92US-0899073 93WO-US03388 Francoeur ¥, Larson admin

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Best Local S
Matches 28
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                             This peptide is GLP-1(7-34) [GLP = glucagon-like peptide], a truncated deriv. of GLP-1. GLP-1 and its deriv.s are useful in the treatment of Non-Insulin Dependent Diabetes Mellitus (NIDDM). During processing in the pancreas and intestine, GLP-1 (AAR63345) is converted to a 31 amino acid peptide having amino acids 7-37 of GLP-1, alternatively referred to as insulinotropin. GLP-1(7-37) has insulinotropic activity, ie. it is able to stimulate, or cause to be stimulated, the synthesis of the hormone insulin. Other derivs. of GLP-1 are shown in AAR63246-51. It has been discovered that prolonged plasma elevations of GLP-1, and related polypeptides, are necessary during the meal and beyond to achieve sustained glycemic control in patients with NIDDM. The invention provides a compsn. that has prolonged action after each administration.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAR63249;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAR63249 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ionophoresis.
                                                                                                                                                                                                                                                                                     Treatment of non-insulin dependent diabetes mellitus - using glucagon-like peptide 1 or deriv. with prolonged action for sustained glycaemic control
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12-OCT-1994.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EP619322-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            non-insulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Insulinotropin (GLP-1(7-34)) for use in treating NIDDM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              02-MAY-1995
                                                                                                                                                                                                                                                                                                                                                                                    Danley
                                                                                                                                                                                                                                                                                                                                                                                                                                                         07-APR-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10-FEB-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         insulinotropic activity; GLP-1; glucagon-like protein 1; NIDDM;
non-insulin dependent diabetes mellitus; insulintropin; truncat
                                                                                                                                                                                                                                                                                                                                                                                                               (PFIZ ) PFIZER INC. (PFIZ ) PFIZER CORP.
                                                         Sequence
                                                                                                                                                                                                                                                             Claim 2; Page 46; 70pp; English.
                                                                                                                                                                                                                                                                                                                                               WPI;
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28; Conser
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Hong Q, Yesook K;
                                                         28
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                                                         AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                          93US-0044133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     peptide;
100.0%;
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Pred. No. 1.7e-14;
Mismatches 0;
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     144; DB 15;
No. 1.7e-14;
                                                                                                                                                                                                                                                                                                                                                                                          Kim Y,
                                                                                                                                                                                                                                                                                                                                                                                           Lambert WJ;
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                  Length
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Query Match Best Local Similarity

Score Pred.

AAW02644
ID AAW0
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AC AAW0
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standard;

Peptide;

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AAW02644; AAW02644 RESULT

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RESULT
AAW16669
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               29
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                                          Query Match
Best Local
                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                               profile; GLP-1.
                                                                                                                                                                                                                                                                                                                                                                                                                                 Tetradecanoylated glucagon like peptide 1 derivative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAW16669;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAW16669 standard;
                                                                                            The present sequence is a pharmacologically active peptide hormone (PH) derivative, where the parent PH, glucagon like peptide 1, has been modified by introducing a carboxy-terminal lipophilic substituent, specifically tetradecancyl, giving it a protracted profile of action in the body compared to the parent PH.
                                                                                                                                                                                                                                                                                                  26-SEP-1996
                                                                                                                                                                                                                                                                                                                                                                               Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                        Hormone; derivative; glucagon like peptide 1; modification; lipophilic substituent; tetradecanoyl; protracted; action;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    22-JUL-1997
                                                                                                                                                                                                     WPI; 1996-443133/44
                                                                                                                                                                                                                       Halstrom JB,
Kurtzhals P;
                                                                                                                                                                                                                                               (NOVO ) NOVO-NORDISK
                                                                                                                                                                                                                                                                  17-MAR-1995;
                                                                                                                                                                                                                                                                                  18-MAR-1996;
                                                                                                                                                                                                                                                                                                                    WO9629342-A1
                                                                                                                                                                                                                                                                                                                                                       Modified-site
                                                                                                                                                                   profile of action.
                                                                                                                                                                           New peptide hormone derivs. - having a lipophilic substitintroduced into the N-terminal or C-terminal for a protrac
                                                                              Sequence
                                                                                                                                                  Disclosure; Page 5; 21pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                28;
                                    Similarity 100
28; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                               28
                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                               AA;
                                                                                                                                                                                                                                Hansen PH,
                                                                                                                                                                                                                                                                  95DK-0000275
                                                                                                                                                                                                                                                                                   96WO-DK00106
                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers 28
                                                                                                                                                                                                                                                                                                                                      peptide;
                                             100.0%;
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                                    0;
                                             Score 144; DB 17;
Pred. No. 1.7e-14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AA
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                                      Mismatches
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                                                         17;
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24-JAN-1997

(first entry)

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RESULT
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Best Local S
Matches 28
                                                                                                                          Fusion protein const
growth hormone relea
parathyroid hormone;
                                                                                                                                                                                                                                                                                                                                                                                                                        The present sequence is that of residues 7-34 of glucagon-like peptide-1 (GLP-1 (7-34)). Compsns. contg. a GLP-1 cpd. and a phenolic and/or an alcoholic aromatic cpd. result in a thixotropic gel showing a protracted release of the active GLP-1 cpd. The compsns. can be used as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GLP-1 (7-34); thixotropic;
phenol; alcohol; aromatic;
                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Disclosure; Page 3; 16pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21-DEC-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO9620005-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Glucagon-like
                    07-DEC-1994;
                                        07-DEC-1995;
                                                                                  WO9617942-A1
                                                                                                      Synthetic
                                                                                                                                                                   Target peptide
                                                                                                                                                                                         15-JAN-1997
                                                                                                                                                                                                                                  AAR98950
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New compsns.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 1996-321644/32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (NOVO ) NOVO-NORDISK AS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23-DEC-1994;
(BION-) BIONEBRASKA INC
                                                                                                                                                                                                                                                                                                                                                                                                     insulinotropic age
(7-37) is used in
                                                                                                                                                                                                                                                                                    \vdash
                                                                                                                                                                                                                                                                                                        1 HAEGTFTSDVSSYLEGQAAKEFIAWLVK 28
                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          compsns. contg. glucagon-like peptide-1 - comprising gels protracted released of GLP-1 in the treatment of diabetes
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                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                  standard;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Jorgensen KH;
                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               peptide-1 residues 7-34.
                                                                                                                                                                                                                                                                                                                                                                                                    active GLP-1 cpd.. The compsns. can be used as agents in the treatment of diabetes. In partic. GLP-1 in the examples of the invention (sequence not given).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         94DK-0001478
                                                                                                                                    releasing
                                                                                                                                                construct; isolation; purification;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              95WO-DK00516
                    94US-0350530
                                                                                                                                                                   (GLP1(7-34)) used in
                                         95WO-US15800
                                                                                                                                                                                                                                 peptide;
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                                                                                                                           ing factor, glucagon-like inclusion body; carbonic a
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gel; protracted
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                                                                                                                                                                                                                                                                                                                           Score 144; DB 17;
Pred. No. 1.7e-14;
); Mismatches 0;
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                                                                                                                                                                 fusion protein construct.
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l release.
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RESULT
AAW93527
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        οy
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  carbonic anhydrase and a variable fused polypeptide containing a target peptide. The method comprises precipitating either the FPC a fragment of the FPC including the carbonic anhydrase. An alternative method of producing the peptide comprises expressing tFPC as part of an inclusion body. The target peptides of the FPC derived from growth hormone releasing factor (GRF), glucagon-like peptide 1 (GLP1) or parathyroid hormone (PTH). This sequence corresponds to amino acids 7-34 of GLP1.
                                                                                                                                                                                                                                             cyclic adenosine monophosphate; cyclic nucleotide degradation; cyclic guanosine monophosphate; antidiabetic; hypoglycaemic; acromegaly; anti-obesity; non-insulin-dependent; mature onset; pancreatic disease; secondary hyperglycemia; pancreatitis; pancreasectomy; pheochromocytoma; hemochromatosis; endocrine disease; Cushing's syndrome; latrogenic; hyperthyreosis; benzothiadiazine saliuretic; diazoxide; gluccocrticoid; pathological glucose tolerance; hyperglycemia, dyslipoproteinemia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 18; Page 47; 67pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A new method for the isolation and/or purification of a peptide employs a fusion protein construct (FPC) compris
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Isolation and purificm of peptide(s)
- which include a carbonic anhydrase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            De LA MOTTE RS, Her
Partridge BE, Stout
                                                                                                                                                                                                           Synthetic
                                                                                                                                                                                                                                                                                                                                  Diabetes mellitus; obesity; therapy; treatment;
                                                                                                                                                                                                                                                                                                                                                                                                            AAW93527;
                                                                                                                                                                                                                                                                                                                                                                                                                                    AAW93527 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  polypeptide
                                   Adermann K,
                                                                                             11-MAR-1998;
12-SEP-1997;
                                                                                                                                    11-SEP-1998;
                                                                                                                                                                                    WO9914239-A1
                                                                                                                                                                                                                                    hyperlipoprotenemia;
                                                                                                                                                                                                                                                                                                                                                           Peptide used in treatment of diabetes mellitus and obesity
                                                                                                                                                                                                                                                                                                                                                                                  15-JUN-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              σ
           1999-244026/20
                                                           FORSSMANN W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              28 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                   Forssmann
                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                 98DE-1010515.
97DE-1040081.
97DE-1057739.
                                                                                                                                    98WO-EP05804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Henriksen
                                                                                                                                                                                                                                                                                                                                                                                                                                    peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%;
                                                                                                                                                                                                                                 hypotension
                                   WG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Wagner
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB,
                                                                                                                                                                                                                                                                                                                                                                                                                                     28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                   Meyer M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 144; DB 17;
Pred. No. 1.7e-14;
                                                                                                                                                                                                                                                                                                                                                                                                                                     AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Holmquist FW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               from and a
                                    Richter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               m fusion protein constructs a variable fused
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Manning
                                   70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0,
                                                                                                                                                                                                                                                                                                                                    hormone;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     comprising
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   recombinant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           28;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        מ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FPC
                                                                                                                                                                                                                                                                                                                                    cGMP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
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CC This invention describes a composition containing at least two of the CC components (a) hormone that stimulates production of cyclic adenosine CC monophosphate (cAMP) (b) inhibitor of cyclic nucleotide degradation CC and (c) hormone that stimulates production of cyclic guancsine CC monophosphate (cGMP). This composition has antidiabetic, hypoglycaemic, CC and anti-obesity activity. The product described in the invention CC can be used for treatment of (i) diabetes mellitus (non-)insulin CC dependent or mature onset diabetes, (ii) secondary hyperglycemia CC associated with pancreatic disease (chronic pancreatitis, pancreasectomy CC or hemochromatosis) or endocrine disease (acromegaly, Cushing's CC syndrome, pheochromocytoma or hyperthyreosis), (iii) iatrogenic CC (plucocorticoids), (iv) pathological glucose tolerance, (v) hyperglycemia, (vi) dyslipoproteinemia, (vii) obesity, (viii) hyperlipoprotenemia
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim
                                                                                                                                                                                                                                                                                                                                                                                                                Peptide amidation; amidative cleavage;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     and/or hypotension.
                                                                                                                                                                                                                                                                                                                                                                                      Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Modified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAB07295;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAB07295 standard;
The present sequence is a modified Glucagon Like Peptide (GLP) fragment. This sequence is composed of residues 7 to 34 of GLP, and was produced by attempted clostripain catalysed amidation of another modified GLP fragment (AABU7291) at pH 7.9. Hydrolysis at Lys34 occured to produce the
                                                                                                  Preparation of peptide with C-terminal alpha-carboxamide residue, of growth hormone releasing factors comprises treating substrate with ammonia in presence of clostripain \dot{\,}
                                                                                                                                                              WPI;
                                                                                                                                                                                                                                                   06-NOV-1998;
16-DEC-1998;
                                                                                                                                                                                                                                                                                               05-NOV-1999;
                                                                                                                                                                                                                                                                                                                             18-MAY-2000
                                                                                                                                                                                                                                                                                                                                                        WO200028067-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        17-JAN-2001
                                                                      Example
                                                                                                                                                                                          Dormady D,
                                                                                                                                                                                                                     (BION-) BIONEBRASKA INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   haegtftsdvssylegqaakefiawlvk 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HAEGTFTSDVSSYLEGQAAKEFIAWLVK 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30; Page 18;
                                                                                                                                                              2000-376575/32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Glucagon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                           Stout JS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ΑA;
                                                                                                                                                                                                                                                    98US-0107311
98US-0212663
                                                                                                                                                                                                                                                                                                 99WO-US26060
                                                                           16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Like Peptide (GLP) # 5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       38pp; German.
                                                                                                                                                                                                                                                                                                                                                                                                                                 C-terminal alpha-carboxamide; GLP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 peptide; 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                C-terminal alpha-carboxamide; GLP; clostripain; clostridopeptidase B; glucagon like peptide.
                                                                         48pp;
                                                                                                                                                                                           Strydom
                                                                         English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 144; DB 20; pred. No. 1.7e-14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AA
                                                                                                                                                                                           DJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                           Holmquist
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
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                                                                                                                                                                                             Wagner FW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0:
       produce the
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                                                                                                                                     e.g.
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QΥ

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HAEGTFTSDVSSYLEGQAAKEFIAWLVK 28

Matches

Similarity 100 28; Conservative

0;

Indels

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Gaps

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Best Local S
Matches 28
        Query Match
Best Local 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     present sequence. The expected product would have had a C-terminal alpha-carboxamide residue. The peptide of AAB07291 was treated with an ammonia reagent and clostripain (also known as clostridopeptidase B). Clostripain is an extracellular thiol endoprotease from Clostridia. Clostripain cleaves arginine containing peptides amidatively at an arginary persentation books.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Arg-Xaa
                                                                                                                                                                                                                               cells by mellitus
                                                                                                                                                                                                                                                                                                     Egan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Glucagon-like peptide-1; diabetes mellitus type 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Glucagon-like peptide-1 fragment GLP-1 (7-34).
                                                                                      This sequence represents a glucagon-like peptide-1 (GLP-1) fragment. GLP-1 is a hormone normally secreted by neuroendocrine cells of the gin response to food. GLP-1 fragments or Extendin-4 growth factor fragments can be used in the production of a population of insulin-producing cells from a population of non-insulin producing the methods may also be used to promote pancreatic amylase producing cells to produce both insulin and amylase. The methods are used to traditate mellitus (type 1) in humans, domesticated animals, livestock
                                                                                                                                                                                                                                        Differentiation of non-insulin producing cells cells by glucagon-like peptide-1 or extendin-4,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    05-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAY78952;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAY78952
                                                                               pets.
                                                                                                                                                                                                      Disclosure; Page 16; 119pp; English
                                                                                                                                                                                                                                                                              WPI;
                                                                                                                                                                                                                                                                                                                             (USSH)
                                                                                                                                                                                                                                                                                                                                                     10-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                            10-AUG-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                          WO200009666-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens.
                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                      J,
                                                                                                                                                                                                                                                                              2000-205999/18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              peptide bond.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                             US DEPT HEALTH & HUMAN SERVICES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    standard; peptide;
                                                                                                                                                                                                                                                                                                      Perfetti R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          28 AA;
                                                          28
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                          AA;
                                                                                                                                                                                                                                                                                                                                                     98US-0095917
                                                                                                                                                                                                                                                                                                                                                                               99WO-US18099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         type 1;
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          100.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GLP-1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 144; DB 21;
Pred. No. 1.7e-14;
; Mismatches 0;
Score 144; DB 21;
Pred. No. 1.7e-14;
Mismatches 0;
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                                                                                                                                                                                                                                                                                                         A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            insulin producing
; livestock; pet.
                                                                                                                                                                                                                                                                                                         Greig
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                                                                                                                                                                                                                                                                                                         Holloway
                                                                                                                                                                                                                                               into insulin-producing
, used to treat diabetes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cell; insulin; amylase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           28;
                            28;
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                                                                                                   livestock
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                                                                                                             treat
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AAG63270
ID AAG6
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AAE09258
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                                                                                                                                                                                                                                                         XX DX DX XX
                                                                                                                   RESULT
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Best Local
                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                            Glucagon-like peptide-1 crystals for treating diabetes are prepared from mother liquor containing glucagon-like-peptide-1 related molecules dissolved in buffered solution and alcohol \,
                                                                                                                                                                                                                                                                            The present sequence is a human glucagon-like peptide-1 related molecule (GLP)-1 derivative. The single tetragonal flat rod-shaped or plate-like crystals of a GLP are prepared from a crystallisation solution containing a GLP, a buffering agent, an alcohol or a mono or disaccharide and optionally ammonium sulphate or zinc. The GLP crystals are used in manufacturing process, in pharmaceutical formulations for treating diabetes, obesity or related conditions in mammals.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      obesity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAE09258 standard;
Glucagon-like peptide 1; GLP-1; soluble GLP-1
                                              01-OCT-2001
                                                                     AAG63270;
                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                          Disclosure; Page 11; 17pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2001-529113/58.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hermeling RN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11-DEC-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11-DEC-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens.
Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                manufacturing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human glucagon-like
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAE09258;
                     Amino acid sequence of glucagon-like peptide 1 (GLP-1) analogue
                                                                                          AAG63270 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human; glucagon-like peptide-1 related
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (HERM/) HERMELING R N. (HOFF/) HOFFMANN J A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                <u>--</u>
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                                                                                                                                                              1 HAEGTFTSDVSSYLEGQAAKEFIAWLVK 28
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                                                                                                                                                  haegtftsdvssylegqaakefiawlvk 28
                                                                                                                                                                                                   28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NARASIMHAN C.
                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                        28
                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                            (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                process;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hoffmann
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      peptide;
                                                                                         protein;
                                            entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 peptide-1
                                                                                                                                                                                                          100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               pharmaceutical formulation; therapy; diabetes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      28
                                                                                          28
                                                                                                                                                                                               0;
                                                                                                                                                                                               Score 144; I
Pred. No. 1.7
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Narasimhan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   related molecule
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A
                                                                                          A
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            molecule; GLP; GLP crystal;
                                                                                                                                                                                               DB 22;
L.7e-14;
es 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (GLP)-1 derivative
                                                                                                                                                                                                                    Length
                                                                                                                                                                                                Indels
                                                                                                                                                                                                                      28;
                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                            containing
                                                                                                                                                                                              Gaps
                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                RESULT 11
AAG63273
                                                                                                                                                                                                                                                                                          DЬ
                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                  comprises dissolving the insoluble compound in aqueous base or acid; neutralizing the GLP-1 solution to a pH at which no amino acid racemisation of the GLP-1 compound occurs; and isolating GLP-1 from the neutralized solution. The method is used to prepare a soluble for of a GLP-1 compound. The soluble form of GLP-1 is physiologically ac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The present sequence represents a glucagon-like peptide 1 (GLP-1) analogue. The specification describes a method for preparing a GLP-1 compound that is soluble in aqueous form at pH 7.4 from a GLP-1 compound that is insoluble in aqueous form at pH 7.4. The method
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Preparing a Glucagon-like peptide 1 compound soluble in aqueous solution at pH 7.4, comprises dissolving the insoluble form in a base or acid and neutralizing the solution -
         27-JAN-2000;
09-AUG-2000;
                                                                                                                Synthetic
                                                                                                                                      Glucagon-like
                                                                                                                                                                                    01-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2001-476192/51.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               27-JAN-2000; 2000US-0178438
09-AUG-2000; 2000US-0224058
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         02-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Misc-difference
                                           16-JAN-2001;
                                                                  02-AUG-2001
                                                                                         WO200155213-A2
                                                                                                                                                             An insoluble glucagon-like peptide 1 (GLP-1) compound.
                                                                                                                                                                                                           AAG63273;
                                                                                                                                                                                                                                 AAG63273 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Disclosure; Page 12; 49pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (ELIL ) LILLY & CO ELI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  16-JAN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200155213-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Synthetic
                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                28
                                                                                                                                                                                                                                                                                                                                       Conservative
         2000US-0178438
2000US-0224058
                                            2001WO-US00010
                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Rinella
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2001WO-US00010
                                                                                                                                     peptide 1;
                                                                                                                                                                                                                                                                                                                                                                                                 Ą,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note= "this residue is Lys-COOH or Lys-Gly-COOH"
                                                                                                                                                                                                                                 protein;
                                                                                                                                                                                                                                                                                                                                                  100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JVJ;
                                                                                                                                       GLP-1; soluble GLP-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       English.
                                                                                                                                                                                                                                  28
                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                  Score 144; DB 22;
Pred. No. 1.7e-14;
                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                     physiologically active.
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Indels Length

Gaps

0

28; 0,

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in aqueous

0;

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The present sequence represents an insoluble glucagon-like peptide 1 (GLP-1). The specification describes a method for preparing a GLP-1 compound that is soluble in aqueous form at pH 7.4 from a GLP-1 compound that is insoluble in aqueous form at pH 7.4. The method comprises dissolving the insoluble compound in aqueous base or acid; neutralizing the GLP-1 solution to a pH at which no amino acid racemisation of the GLP-1 compound occurs; and isolating GLP-1 from the neutralized solution. The method is used to prepare a soluble form of a GLP-1 compound. The soluble form of GLP-1 is physiologically active.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Preparing a Glucagon-like peptide 1 compound soluble in aqueous solution at pH 7.4, comprises dissolving the insoluble form in aqueous base or acid and neutralizing the solution \,
                                                                                                                                                                                                            05-MAY-1986;
26-JAN-1988;
01-JUN-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2001-476192/51.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (ELIL ) LILLY
                                                                                                                                                                                                                                                                                                                                                                   Maturity onset diabetes mellitus; MODM; pathogenesis
                                                                                                                                                                                                                                                                                                                                                                                               GLP-1 derivative
                                                                                                                                                                                                                                                                                                                                                                                                                        02-DEC-1992
                                                                                                                                                                                                                                                                                                                   US5118666-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAR24524 standard;
The sequence given is derived from glucagon-like peptide 1 (GLP-1) and has a higher insulinotropic activity than GLP-1 (1-36) and GLP-1 (1-37). The peptide may be modified to a acid addn. or carboxylic acid addn.salt or lower alkyl ester and amide (lower (di)alkyl amide)
                                                                                         New glucagon-like peptide 1 derivatives - have i activity and are used to treat Diabetes mellitus
                                                                                                                                                                                                                                                                05-MAY-1986;
                                                                                                                                                                                                                                                                                          02-JUN-1992
                                                                                                                                                                                                                                                                                                                                             Homo
                                                                Claim 1; Page 20 and Fig 1; 16pp; English.
                                                                                                                                   WPI;
                                                                                                                                                           Habener
                                                                                                                                                                                    (GEHO ) GEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HAEGTFTSDVSSYLEGQAAKEFIAWLVK 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          haegtftsdvssylegqaakefiawlvk 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4; Page 38; 49pp; English.
                                                                                                                                 1992-208235/25.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              28 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; ilarity 100.0%; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Rinella JVJ;
                                                                                                                                                                                      HOSPITAL CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8 00
                                                                                                                                                                                                                                                                                                                                                                                                                         (first
                                                                                                                                                                                                              86US-0859928.
88US-0148517.
90US-0532111.
                                                                                                                                                                                                                                                                 86US-0859928
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ELI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                          entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 144; DB 22;
Pred. No. 1.7e-14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                           have insulinotropic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
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AAR63248 ID AAR6

AAR63248 standard;

peptide;

29

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RESULT 1
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Best Local Similarity
Matches 28; Conserv
                                         Query Match
Best Local S
Matches 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         derivative. These modified derivatives have the same insulinotropic activity as the original GLP-1 derivative. These peptides are used in the treatment of maturity onset diabetes mellitus (MODM). They may also be used in the study of MODM pathogenesis. Dosages can be administered intravenously, intramuscularly or subcutaneously.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                           Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  27-JUN-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAR45436;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAR45436 standard;
                                                                                                                         The sequence is that of a derivative of insulinotropin which has insulinotropic activity and is useful for enhancing insulation in a mammal, partic, for treating Type II diabetes (claimed). It is partic, suited for delivery to a mammal by
                                                                                                                                                                           Claim 3; Page 20; 32pp; English.
                                                                                                                                                                                              New derivs, of glucagon-like peptide 1 and insulinotropin enhancing insulin action in a mammal, partic. by iontophoret
                                                                                                                                                                                                                                                                      (PFIZ ) PFIZER INC
                                                                                                                                                                                                                                                                                                               14-APR-1993;
                                                                                                                                                                                                                                                                                                                                   23-DEC-1993.
                                                                                                                                                                                                                                                                                                                                                        WO9325579-A.
                                                                                                                                                                                                                                                                                                                                                                                               Type II diabetes.
                                                                                                                                                                                                                                                                                                                                                                                                           Insulinotropic;
                                                                                                                                                                                                                                                                                                                                                                                                                             Insulinotropin derivative
                                                                                                                                                                                                                                                    Andrews
                                                                                                                                                                                                                                                                                           15-JUN-1992;
                                                                                             Sequence
                                                                                                               ionophoresis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 haegtftsdvssylegqaakefiawlvk 28
HAEGTFTSDVSSYLEGQAAKEFIAWLVK 28
                                                                                                                                                                                                                                 1994-007457/01
                                           28;
                                                                                                                                                                                                                                                    gc,
                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                              29
                                         100.0%;
llarity 100.0%;
Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                  Daumy GO,
                                                                                               AA;
                                                                                                                                                                                                                                                                                            9205-0899073
                                                                                                                                                                                                                                                                                                                  93WO-US03388
                                                                                                                                                                                                                                                                                                                                                                                                           activity;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%;
                                                                                                                                                                                                                                                      Francoeur ML,
                                                                                                                                                                                                                                                                                                                                                                                                             enhancing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29
                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 144; DB 1
Pred. No. 1.8e-1
                                                     Score 144;
Pred. No. 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                             Mismatches
     28
                                                                                                                                                                                                                                                                                                                                                                                                              insulin
                                                                                                                                                                                                                                                      Larson
                                               .8e-14;
                                                                  DB 15;
                                                                                                                                                                                                                                                                                                                                                                                                              activity;
                                                                                                                                                                                                    by iontophoretic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                 Length
                                                Indels
                                                                                                                                                  insulin
                                                                   29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                  used for
                                                0;
                                                                                                                                                                                                       admin
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RESULT 1
AAR69075
                                                                                                                                                                                                                                                                                                                                               80
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                                                                                                                                                                                                                                                                                         Query Match
Best Local :
                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                    This peptide is GLP-1(7-35) [GLP = glucagon-like peptide], a truncated deriv. of GLP-1. GLP-1 and its deriv.s are useful in the treatment of Non-Insulin Dependent Diabetes Mellitus (NIDDM). During processing in the pancreas and intestine, GLP-1 (AAR63245) is converted to a 31 amino acid peptide having amino acids 7-37 of GLP-1, alternatively referred to as insulinotropin. GLP-1(7-37) has insulinotropic activity, ie. it is able to stimulate, or cause to be stimulated, the synthesis of the hormone insulin. Other derivs. of GLP-1 are shown in AAR63246-51. It has been discovered that prolonged plasma elevations of GLP-1, and related polypeptides, are necessary during the meal and beyond to achieve sustained glycemic control in patients with NIDDM. The invention provides a compsn. that has prolonged action after each administration.
Synthetic
                           cleavage.
                                      Glycogen Like Peptide;
                                                                  Glycogen Like
                                                                                                                                                   AAR69075 standard;
                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 2; Page 46; 70pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sustained glycaemic control
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Treatment of non-insulin dependent diabetes mellitus - using glucagon like peptide 1 or deriv. with prolonged action for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 1994-311774/39.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Danley DE,
Qi H, Oih,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     07-APR-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10-FEB-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EP619322-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         insulinotropic activity; GLP-1; glucagon-like protein 1; NIDDM; non-insulin dependent diabetes mellitus; insulintropin; truncat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Insulinotropin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                02-MAY-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAR63248;
                                                                                             23-AUG-1995
                                                                                                                         AAR69075;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (PFIZ ) PFIZER INC. (PFIZ ) PFIZER CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          12-OCT-1994
                                                                                                                                                                              15
                                                                                                                                                                                                                                               1 HAEGTFTSDVSSYLEGQAAKEFIAWLVK 28
                                                                                                                                                                                                                   haegtftsdvssylegqaakefiawlvk 28
                                                                                                                                                                                                                                                                             28;
                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gelfand RA, Geugna.
                                                                                                                                                                                                                                                                                                                                               29 AA;
                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                            (first entry)
                                                                Peptide 1 (7-34) + G-R-NH2, G-R-G or G-R-G-NH2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     93US-0044133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (GLP-1(7-35))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               94EP-0300981.
                                                                                                                                                   peptide;
                                                                                                                                                                                                                                                                          100.0%; Score 144; DB 15;
100.0%; Pred. No. 1.8e-14;
tive 0; Mismatches 0;
                                      endopeptidase; transpeptidation; trypsin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Geoghegan KF,
                                                                                                                                                   29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  for use in treating
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Kin
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Lambert WJ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NIDDM
                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                      29;
                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                         Gaps
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Search completed:
Job time: 58 sec
                                                       В
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                                                                                                                                                       Matches
                                                                                                            Best
                                                                                                                      Query Match
                                                                                                                                                                        The native or naturally occurring sequence of growth hormone releasing factor is AAR69073. A pharmaceutical compsn. of GRF(1-44)-NH2 produced by the method of the invention is claimed. AAR69075 does not seem to be referred to the patent application apart from in the claims where a polypeptide with this sequence produced by the method of the invention is claimed. The peptide appears to Glycogen Like Peptide 1 residues 7-34 plus a carboxy terminal group for trypsin cleavage.
                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                            Transpeptidation of recombinant polypeptides endopeptidase such as trypsin or thrombin to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Key
Misc-difference
                                                                                                                                                                                                                                                                           Claim 22; Page 58; 69pp; English.
                                                                                                                                                                                                                                                                                                   residue.
                                                                                                                                                                                                                                                                                                                                              WPI; 1995-075233/10
                                                                                                                                                                                                                                                                                                                                                                   Henriksen D,
                                                                                                                                                                                                                                                                                                                                                                                         (BION-) BIONEBRASKA INC
                                                                                                                                                                                                                                                                                                                                                                                                                20-JUL-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                     19-JUL-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           02-FEB-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO9503405-A
                                                                                                           Local
                                                    ch 100.0%;
l Similarity 100.0%;
28; Conservative 0
                                                                                                                                                       29
         Мау
                                                                                                                                                                                                                                                                                                                                                                   Manning S,
                                                                                                                                                       ΑA;
                                                                                                                                                                                                                                                                                                                                                                                                               93US-0095162
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
          20,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /label= G-R-NH2; G-R-G,
          2002, 09:35:59
                                                                                                                                                                                                                                                                                                                                                                   Partridge
                                                                                                 0;
                                                                                                           Score 144;
Pred. No. 1
                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                   В,
                                                                                                           1.8e-14;
                                                                                                                                                                                                                                                                                                                                                                   Stout
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OR G-R-G-NH2
                                                                                                                       DB 16;

    using
modify C-terminal

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                                                                                                                                                                                                                                                                                                                                                                   Wagner
                                                                                                                       Length
                                                                                                  Indels
                                                                                                                       29;
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                                                                                                 0,
                                                                                                 Gaps
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Minimum
Maximum
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No.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Perfect score:
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Best Local
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PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/095,162
FILING DATE: 20-JUL-1993
ATTORNEY/AGENT INFORMATION:
NAME: Nelson, Albin J.
REGISTRATION NUMBER: 28,659
REGISTRATION NUMBER: 28,659
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REGISTRATION NUMBER: 28,659
REFERENCE/DOCKET NUMBER: 86
TELECOMMUNICATION INFORMATION:
TELEPHONE: 612-332-5300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                       IMMEDIATE SOURCE:
CLONE: GLP1 (7-34)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION: Enzymatic Method for Modification TITLE OF INVENTION: Recombinant Polypeptides
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
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APPLICANT: Wagner, Fred W. APPLICANT: Stout, Jay APPLICANT: Henriksen, Dennis
                                                                                                                                                                                                                                                                                                                                                                            MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US/0 FILING DATE: 06-JUN-1995
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                                                                                                                                                                                       1 HAEGTFTSDVSSYLEGQAAKEFIAWLVK 28
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3100 No. 5707826west Center
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Partridge, Bruce
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                                                                                                                                                                                                                                    Score 144; DB 1;
Pred. No. 9.4e-15;
Mismatches 0;
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Best Local S
                                                                                                                                                                                                                                                                     Patent No. 6284727 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                     Sequence 5,
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REFERENCE/DOCKET NUMBER: 86
TELECOMMUNICATION INFORMATION:
TELEPHONE: 612-332-5300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 29-AUG-1995
ATTORNEY/AGENT INFORMATION:
NAME: Carter, Charles G.
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CLONE: GLP1 (7-34)
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LENGTH: 28 amino acids
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                          APPLICANT: Danley, Dennis E. TITLE OF INVENTION: Prolonged Delivery of Peptides
                                                                                                                                                                                                                                      APPLICANT:
APPLICANT:
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                                                                                                                           CORRESPONDENCE ADDRESS:
                                                                                                                                            NUMBER OF SEQUENCES:
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ZIP: 55402
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                                COUNTRY: U.S.A. ZIP: 10017-5755
                                                                 STATE:
                                                                               CITY: New York
                                                                                            STREET:
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28; Conserv
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Y: U.S.A.
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3100 No. 6037143west Center
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Manning, Shane
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Gelfand, Robert A.
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                                                                                                                                                                                                                                       Lambert, William J.
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                                                                                              Street, 20th Floor
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SOFTWARE: Patentin Release #1.0, Version #1.25 CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/472,349

COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS

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GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
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REFERENCE/DOCKET NUMBER: PCI
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212)573-1189
TELEPAX: (212)573-1939
TELEX: N/A
                                                                                                                                                                                  APPLICANT: BIONEDIASKA, Inc.
TITLE OF INVENTION: PRODUCTION OF PEPTIDES USING
TITLE OF INVENTION: RECOMBINANT FUSION PROTEIN CONSTRICTS
NUMBER OF SEQUENCES: 33
CORRESPONDENCE ADDRESS:
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CHROMOSOME/SEGMENT:
MAP POSITION: N/A
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ANTI-SENSE: NO
ANTI-SENSE: NO
THE TIME TYPE: N-terminal
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PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
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SOFTWARE: FastSEQ Version 1.5 CURRENT APPLICATION DATA:
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LIBRARY: N/A
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STRANDEDNESS: sir
TOPOLOGY: linear
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HAPLOTYPE: N/A
CELL LINE: N/A
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               OPERATING SYSTEM:
SOFTWARE: FastSE(
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                                                  COMPUTER:
                                                                                                                COUNTRY:
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linear
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                                               IBM Compatible
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOTTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/095/162
FILING DATE: 20-JUL-1993
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: Nelson, Albin J.
REGISTRATION NUMBER: 28,659
REFERENCE/DOCKET NUMBER: 8648.32-US01
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 18, Application US/08095162 Patent No. 5512459
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Best Local Similarity
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NAME: Carter, Charles G
REGISTRATION NUMBER: 35,093
REFERENCE/DOCKET NUMBER: 8648
TELECOMMUNICATION INFORMATION:
TELEPHONE: 612/332-5300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
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APPLICANT: Manning,
TITLE OF INVENTION:
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
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APPLICATION NUMBER: 08/3
FILING DATE: 07-DEC-1994
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ADDRESSEE: Merchant & Gould
STREET: 3100 No. 5512459west Center
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TELEPHONE: 612/332-9081
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                                                                                                                                                                                                                                                                                                                   CITY: Minneapolis
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Partridge, Bruce
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                                                                                                                                                                                                                                                                                                                                                                                                                                    Shane
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                                                                                                                                                                                                                                                                                                                                                                                                    Enzymatic Method for Modification Recombinant Polypeptides
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                                                                                                                                              ; TOPOLOGY: linear ; MOLECULE TYPE: peptide US-08-470-220A-18
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                                                             Query Match 100.0%;
Best Local Similarity 100.0%;
Matches 28; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Patent No.
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Best Local S
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                                                                                                                                                                                                                                            TELEFAX: 612-332-9081 INFORMATION FOR SEQ ID NO:
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                                                                                                                                                                                                                                                                        NAME: Nelson, Albin J.
REGISTRATION NUMBER: 28,659
REFERENCE/DOCKET NUMBER: 86.6
TELECOMMUNICATION INFORMATION:
TELEPHONE: 612-332-5300
                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                           SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 20-JUL-1993 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/095,162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Manning, Shane
TITLE OF INVENTION: Enzymatic method for Modification of
TITLE OF INVENTION: Recombinant Polypeptides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES:
                                                                                                                                                                                     LENGTH: 29 amino acids
TYPE: amino acid
TODOTOCT
                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US/OFILING DATE: 06-JUN-1995
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            / Match 100.0%; Score 144; DB 1; Local Similarity 100.0%; Pred. No. 9.8e-15; Core 10: Mismatches 0;
COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CITY: Minneapolis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Merchant & Gould
00 No. 5707826west Center
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                                                             Score 144; DB 1;
Pred. No. 9.8e-15;
Mismatches 0;
                                                                                         Length 29;
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                                                             Indels
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US-08-472-349-4
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                                                                                                                                                                     Sequence 4, Applic
Patent No. 628472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME: Carter Charles G.
REGISTRATION NUMBER: 35,093
REFERENCE CHOCKET NUMBER: 8648
TELECOMMUNICATION INFORMATION:
TELEPHONE: 612-332-5300
TELEPAX: 612-332-9081
INFORMATION FOR SEQ ID NO: 18:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
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                                                                                                                                                         GENERAL
                                                APPLICANT: Kim, Yesook
APPLICANT: Lambert, Will
APPLICANT: Qi, Hong
APPLICANT: Gelfand, Roba
APPLICANT: Geoghegan, K.
APPLICANT: Danley, Denn:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
CORRESPONDENCE ADDRESS:
                APPLICANT: Danley, Dennis E.
TITLE OF INVENTION: Prolonged Delivery of Peptides
NUMBER OF SEQUENCES: 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
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APPLICATION NUMBER:
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TITLE OF INVENTION:
NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: amino acid TOPOLOGY: linear
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ZIP: 55402
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CITY: Minneapolis
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                                                                                                                                                                                                                                                                              1 HAEGTFTSDVSSYLEGQAAKEFIAWLVK 28
                                                                                                                                                                                                                                                                                              1 HAEGTFTSDVSSYLEGQAAKEFIAWLVK 28
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                                                                                                                                                         INFORMATION:
                                                                                                                                                                                                                                                                                                                                               Ch 100.0%; Score 144; DB 3; Similarity 100.0%; Pred. No. 9.8e-15; 28; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8, Application US/08967374
6037143
                                                                                                                                                                                       Application US/08472349
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WENTION: Enzymatic Method for Modification of
WENTION: Recombinant Polypeptides
                                                                                 Lambert, William J.
Qi, Hong
Gelfand, Robert A.
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Stout, J
                                                                Geoghegan, Kieran F.
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ADDRESSEE: Pfizer Inc STREET: 235 East 42nd Street, 20th Floor CITY: New York

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk

RY: U.S.A. 10017-5755

New York

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Sequence 6, Application US/08066480
Patent No. 5424286
GENERAL INFORMATION:
APPLICANT: Eng, John
TITLE OF INVENTION: Pharmaceutica
TITLE OF INVENTION: Exendin-3 and
UMBER OF SEQUENCES: 7
                                                                                                                                                                     RESULT 10
US-08-066-480-6
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Best Local (
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REGISTRATION NUMBER: 31,304
REFERENCE/DOCKET NUMBER: PC83
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212)573-1189
TELEFAX: (212)573-1939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MOLECULE TYPE: peptide
HYPOTHETICAL: NO
ANTI-SENSE: NO
FRAGMENT TYPE: N-terminal
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CLASSIFICATION: 514
PRIOR APPLICATION NUMBER: 1
CORRESPONDENCE ADDRESS:
ADDRESSEE: Allegretti & Witcoff, Ltd.
STREET: 10 S. Wacker Drive
                                                                                                                                                                                                                                                                                                                                                                                                         POSITION IN GENOME:
CHROMOSOME/SEGMENT:
MAP POSITION: N/A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE CHARACTERISTICS:
LENGTH: 29 amino acids
TYPE: amino acid
STRANDENESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTORNEY/AGENT INFORMATION:
NAME: Sheyka, Robert F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION DATA: APPLICATION NUMBER: US
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                            CLONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INDIVIDUAL ISOLATE: HAPLOTYPE: N/A CELL LINE: N/A
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRAIN: N/A
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEX: N/A
                                                                                                                                                                                                                                                                       1 HAEGTFTSDVSSYLEGQAAKEFIAWLVK 28
                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N/A
                                                                                                                                                                                                                                                                                                          Conservative
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                                                                 Pharmaceutical Compositions And Use of Exendin-3 and Exendin-4 for Treatment of Diabetes Mellitus
                                                                                                                                                                                                                                                                                                                        100.0%; Score 144; DB 4; 100.0%; Pred. No. 9.8e-15;
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US-08-095-162-1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 1, Application US/08095162 Patent No. 5512459
COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/095,162
FILING DATE: 20-UUL-1993
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 100.0%; Score 144; DB 1 Best Local Similarity 100.0%; Pred. No. 1e-14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEFAX: 312-715-1234
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE/DOCKET NUMBER: 93
TELECOMMUNICATION INFORMATION:
TELEPHONE: 312-715-1000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/066,480
FILING DATE: 24 MAR-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
NAME: McDonnell, John J
REGISTRATION NUMBER: 26,949
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compati
                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: Enzymatic Method for Modification of TITLE OF INVENTION: Recombinant Polypeptides NUMBER OF SEQUENCES: 26
                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
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                                                                                                                                                                                COUNTRY: UZIP: 55402
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OTHER INFORMATION:
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TYPE: amino acid
STRANDEDNESS: single
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY:
                                                                                                                                                                                                                                                                     ADDRESSEE:
                                                                                                                                                                                                                                  Minneapolis
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3100 No. 5512459west Center
                                                                                                                                                                                                                                                                                                                                                                                                              Stout, Jay
                                                                                                                                                                                                USA
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Partridge, Bruce
                                                                                                                                                                                                                                                                                                                                                      Manning,
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                                                                                                                                                                                                                                                                                                                                                              Shane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /label= GLP-1-7-36
/note= "GLP-1(7-36) fragment"
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US-08-470-220A-1
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APPLICANT: Wagner
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                                                                                                            TELEFAX: 612-332-9081 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
APPLICANT:
                MOLECULE TYPE:
IMMEDIATE SOURCE
                                                                                                                                                                                                                                                              CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                        SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                              SEQUENCE CHARACTERISTICS:
                                                                                                                                         TELEPHONE: 612-332-5300
                                                                                                                                                                                                                   FILING DATE: 20-JUL-1993 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IMMEDIATE SOURCE: GLP1 7-36-NH2 (Glucagon-like Peptide)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION:
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TELECOMMUNICATION INFORMATION:
TELEPHONE: 612-332-5300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                        REFERENCE/DOCKET NUMBER: 86.
                                                                                                                                                                                     NAME: Nelson, Albin J
REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US/OFILING DATE: 06-JUN-1995
                                                TOPOLOGY: linear
                                                                                                                                                                                                                                                 APPLICATION NUMBER: US 08/095,162
                                                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY:
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                                                                            LENGTH:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 HAEGTFTSDVSSYLEGQAAKEFIAWLVK 28
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HAEGTFTSDVSSYLEGQAAKEFIAWLVK 28
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                                                            amino acid
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 GLP1-7-36-NH2
                   SOURCE:
                                                                            30 amino acids
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3100 No. 5707826west Center
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Manning, Shane
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(Glucagon-like Peptide)
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Pred. No. 1e-14;
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US-08-967-374-1
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                                                                                                                                                                                                                                                                                                                                                               Sequence 1 Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: PatentIn Ver. 2.0 SEQ ID NO 1
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILE REFERENCE: X-9332B
CURRENT APPLICATION NUMBER: US/08/927,227A
CURRENT FILING DATE: 1997-09-10
NUMBER OF SEQ ID NOS: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Galloway, James A.
APPLICANT: Hoffmann, James A.
TITLE OF INVENTION: GLUCAGON-LIKE INSULINOTROPIC PEPTIDE ANALGOGS,
TITLE OF INVENTION: COMPOSITIONS AND METHODS
                                                                                                                                                                                                                 APPLICANT: Partridge, Bruce APPLICANT: Manning, Shane TITLE OF INVENTION: Recombi NUMBER OF SEQUENCES: 26
                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OTHER INFORMATION: The arginine residue at position 30 is modified OTHER INFORMATION: as to replace the terminal carboxyl group with OTHER INFORMATION: amine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE:
             COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH:
                                                                                                                                                                        CORRESPONDENCE ADDRESS:
ADDRESSEE: Merchant & Gould
STREET: 3100 No. 6037143west Center
                                                                                              COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                          CITY: Minneapolis STATE: MN
                                                                            MEDIUM TYPE:
                                                                                                               ZIP:
                                                                                                                             COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
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                                                                                                                             USA
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Partridge, Bruce
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Stout, Jay
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                                                                            Floppy disk
                                                                                                                                                                                                                                                                                                                                 Fred W.
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100.0%; Pred. No. 1e-14;
tive 0; Mismatches
US/08/967,374
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Pred. No. 1e-14;
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APPLICANT: Galloway, James A.

APPLICANT: Hoffmann, James A.

ITITLE OF INVENTION: GLUCAGON-LIKE INSULINOTROPIC PEPTIDE ANALGOGS,

ITITLE OF INVENTION: COMPOSITIONS AND METHODS

FILE REFERENCE: X-9332B

CURRENT APPLICATION NUMBER: US/09/348,136

CURRENT FILING DATE: 1999-07-06

PRIOR APPLICATION NUMBER: US 08/927,227

PRIOR FILING DATE: 1997-09-10

NUMBER OF SEQ ID NOS: 1

SOFTWARE: Patentin Ver. 2.0

SEQ ID NO 1

LENGTH: 30

TYPE: PRT
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                                                                                                                                                                      ORGANISM: Homo sapiens
FEATURE:
OTHER INFORMATION: The arginine residue at position 30 is modified so
OTHER INFORMATION: as to replace the terminal carboxyl group with an
OTHER INFORMATION: amine.
US-09-348-136-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B
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                                                                            Query Match 100.0%; Score 144; DB 4; Length 30; Best Local Similarity 100.0%; Pred. No. 1e-14; Matches 28; Conservative 0; Mismatches 0; Indels
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Best Local Similarity 100.0%; Pred. No. 1e-14;
Matches 28; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 1, Application US/09348136 Patent No. 6133235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/520,485
APPLICATION SPANG-1995
TYTTER DATE: 29-AUG-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEFAX: 612-332-9081
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 30 amino acids
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ATTORNEY/AGENT INFORMATION:
NAME: Carter, Charles G.
REGISTRATION NUMBER: 35,093
REFERENCE/DOCKET NUMBER: 86.8.32-USD1
TELECOMMUNICATION INFORMATION:
TELEPHONE: 612-332-5300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY: linear MOLECULE TYPE: pep
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Search completed: May 20, 2002, 09:35:22 Job time: 21 sec

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Result
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB
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Perfect score:
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             Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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          length: 0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     283138 seqs, 96089334 residues
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Gapop 10.0 , Gapext 0.5
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HAEGTFTSDVSSYLEGQAAKEFIAWLVK 28
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     SUMMARIES
proglucagon - chic glucagon-like pept glucagon-like pept glucagon precursor glucagon precursor glucagon precursor glucagon precursor glucagon i precursor glucagon i precursor glucagon in precursor glucagon precursor glucagon precursor glucagon - marbled glucagon - smaller glucagon - smaller glucagon - smaller glucagon - smaller glucagon - turkey glucagon - turkey glucagon - rabbit
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| A A A A A A A A A A A A A A A A A A A | A; Ac A; Mc A; Mc A; Ti B; Ti A; Ti A; Re A; Re A; Ru B; Bre B; Bre B; Bre B; Bre B; Bre B; Bre | A; Mo A; The R; The R; The R; The A; Ti A; AC A; AC A; NO A; NO A; NO A; NO A; NO | RESULT GCPG GCPG N;Alte N;Cont. C;Spec C;Acce C;Acce R;Thim Regul. A;Refe A;Refe | |
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| Reference number: Accession: A28064 Molecule type: pr Residues: 111-158 Comment: X's repr Superfamily: gluc Keywords: amidate 1-69/Product: glu 1-30/Region: glic 33-69/Product: gl: 750-177-750-101: gl: | cession: lecule ty sidues: sidues: sikov, Cer iol. Cher cession: lecule ty sidues: ference r cession: lecule ty sidues: iol. Cher the: Nati | lecule to sidues: im, L., I im, L., I l. Pept. l. Pept. ference cossion: lecule to this comer, W.I. in Chem. cossion: comer, W.I. in Chem. | agon predeferming the state of | 33333333333333333333333333333333333333 |
| A280 A280 A280 A280 A280 A280 A280 A280 | A917 A917 YPe: 33-61 33-61 26 n. 26 olete olete olete base PB-10 78-10 78-10 78-10 78-10 | ype: 1-69 1-69 Suppy Suppy numbe numbe A603 Ype: 1-30 1-30 1-30 Soc. Soc. | curso names glice glice ac sc ac 19 AO15 AO15 AO15 AO15 AO15 | 90 90 90 90 90 90 90 90 90 90 90 90 90 9 |
| Reference number: A28064; M Accession: A28064 AMOLecule type: protein Residues: 111-158 <buh> Comment: X's represent miss Comment: Y's represent miss Superfamily: glucagon Seywords: amidated carboxyl 11-69/product: glucagon-69 # 11-30/Region: glicentin-rela 13-69/product: glucagon #51 13-69/product: glucagon #51</buh> | A; Accession: A91781 A; Molecule type: protein A; Residues: 33-61 < GRO> R; Orskov C.; Bersani, M.; John J. Biol. Chem. 264, 12826-12826 A; Title: Complete sequences of A; Reference number: A92732; MUJ A; Accession: B32614 A; Molecule type: protein A; Residues: 78-107 < CORS> R; Buhl, T.; Thim, L.; Kofod, H. J. Biol. Chem. 263, 8621-8624, A; Title: Naturally occurring procession: B32614 | A; Molecule type: protein A; Residues: 1-69 <thij 1-30="" <th2="" a.j.="" a60312="" a;="" accession:="" c.;="" l.;="" molecule="" moody,="" number:="" protein="" r;="" reference="" residues:="" strim,="" thim,="" type:=""> A; Residues: 1-30 <th2> A; Note: this peptide is co-secreted will a secrete a; Note: this peptide is co-secreted will a secrete a; Note: this peptide is co-secreted will a secrete a; Note: this peptide is co-secreted will a secrete a; Note: this peptide is co-secreted will a secrete a; Note: this peptide is co-secreted will a secrete a; Note: this peptide is co-secreted will a secrete a; Note: this peptide is co-secreted will a secrete a; Note: this peptide is co-secreted will a secrete a; Note: this peptide is co-secreted will a secrete a; Note: this peptide is co-secreted will a secrete a; Note: this peptide is co-secreted will a secrete a; Note: this peptide is co-secreted will a secrete a; Note: this peptide is co-secrete a; Note: this peptide is co-secrete a; Note: this peptide is co-secrete</th2></thij> | r - pig (; glicent itin rela rofa dome 82 #seque 40; A6031 , A.J. 39-150, 1 39-150, 1 39-150, 1 40; A94233 | 602.5 602.5 602.5 602.5 601.1 601.1 601.1 601.1 601.1 601.1 601.1 601.1 601.1 601.1 601.1 601.1 601.1 601.1 601.1 601.1 601.1 |
| nissi nissi nissi nissi nissi | Joh 1282 35 of 100, H |), 19 of o-sec -281 | fragin; in; ited tted sstic ance nce 12; # | 332222222222222 |
| ing a end; end; statu #status | J produc |)83 a po a po ahreto | meni oxyi pep pep rev 1917 | |
| Reference number: A28064; MUID:88243712 Accession: A28064 Molecule type: protein Residues: 111-158 < BUH> Comment: X's represent missing amino acids, mostly basic, Superfamily: glucagon Superfamily: glucagon-69 #status experimental <g65> 1-30/Region: glicentin-related peptide #status experiment 3-69/Product: glucagon-37 #status predicted <g37> 3-61/Product: glucagon #status experimental <gcn> To 107/Product: glucagon #status experimental <gcn></gcn></gcn></g37></g65> | H.; Hojrup, P.; Hols n-like peptide-1 fro 238 v, C.; Harling, H.; | ossible porcine proglucagon with glucagon from the pns, O.K. 1957 of glucagon. V. Location of | RESULT 1 GCPG glucagon precursor - pig (fragment) N;Alternate names: glicentin; oxyntomodulin N;Contains: glicentin-related peptide; glucagon; glucagon-37 (oxy C;Species: Sus scrofa domestica (domestic pig) C;Date: 17-Dec-1982 #sequence_revision 31-Mar-1993 #text_change 2 C;Accession: A01540; A60312; A91781; B32614; A28064 R;Thin, L.; Moody, A.J. Regul. Pept. 2, 139-150, 1981 A;Title: The primary structure of porcine glicentin (proglucagon) A;Reference number: A94233; MUID:81248172 A;Accession: A01540 | A91742 C39258 C39258 GCDG69 GCDK A61583 A61583 C60840 S44471 GCCB GCCEL GCCBL A61135 S39018 HWGH4G HWGH4G GCFI |
| , that are predicted to exi ; duplication; hormone; int | om human and pig small intes Holst, J.J. 160 in the porcine and human | On fragment. pancreas of amide groups, acid degra | 37 (oxyntomodulin); glucago hange 20-Mar-1998 ucagon). | glucagon - Arabian glucagon - common glucagon 62 - Nort glucagon 69 - dog glucagon - 69 - dog glucagon - slider glucagon - slider glucagon [- Europ glucagon G1 - Nort glucagon - Chinchi glucagon - Europea glucagon - bueype glucagon - bueyfe glucagon - bowfin exendin-4 - Gila m exendin-3 - Mexica glucagon-36 - spot |

F;78-107/Product: glucagon-like peptide 1 #status experimental <GL1>

F;126-158/Product: glucagon-like peptide 2 #status experimental <GL2> F;107/Modified site: amidated carboxyl end (Arg) (amide in mature form from following

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A; Molecule type: protein
A; Residues: 98-127 < ORS>
R; Thomsen, J.; Kristiansen, K.; B
FEBS Lett. 21, 315-319, 1972
A; Title: The amino acid sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C:Species: Homo sapiens (man)
C:Species: Homo sapiens (man)
C:Date: 24-Apr-1984 #sequence_revision 31-Mar-1993 #text_change 08-Dec-2000
C:Accession: A24377; A44197; A30875; A32614; A01541; S23309
R:White, J.W.; Saunders, G.F.
Nucleic Acids Res. 14, 4719-4730, 1986
A:Title: Structure of the human glucagon gene.
A; Cross-references: G
A; Map position 2936-
                                                                                                                                                                                                 C; Comment: In pancreatic alpha-cells, proglucagon is processed to glicentin-related stinal L cells, proglucagon is processed to truncated glucagon-like peptide 1, glucated stinal L cells, proglucagon is processed to truncated glucagon-like peptide 1, glucated stinal L cells, proglucagon is processed to truncated glucagon-like peptide 1, glucated stinal L cells, proglucagon is processed to truncated glucagon-like peptide 1, glucated stinal L cells, proglucagon is processed to glicentin-related stinal L cells, proglucagon is processed to truncated glucagon-like peptide 1, glucated stinal L cells, proglucagon is processed to truncated glucagon-like peptide 1, glucated stinal L cells, proglucagon is processed to truncated glucagon-like peptide 1, glucated stinal L cells, proglucagon is processed to truncated glucagon-like peptide 1, glucated stinal L cells, proglucagon is processed to truncated glucagon-like peptide 1, glucated stinal L cells, proglucagon is processed to truncated glucagon-like peptide 1, glucated stinal L cells, proglucagon is processed to truncated glucagon-like peptide 1, glucated stinal L cells, proglucagon is processed to truncated glucagon-like peptide 1, glucated stinal L cells, proglucagon is processed to truncated glucagon-like peptide 1, glucated stinal L cells, proglucagon is processed to truncated glucagon-like peptide 1, glucated stinal L cells, proglucagon is processed to truncated glucagon is proce
                                                                                                                                                                                                                                                                                                                                                                            Eur. J. Biochem. 206, 691-696, 1992
A;Title: C-terminal sequencing of protein.
A;Reference number: S23188; MUID:92298996
A;Accession: S23309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             R;Bell, G.I.; Sanchez-Pescador, R.; Laybourn Nature 304, 368-371, 1983
A;Title: Exon duplication and divergence in A;Reference number: A44197; MUID:83271477
A;Accession: A44197
                                                                                       A; Gene: GDB: GCG
                                                                                                                                                                                                                                                                                                     A; Molecule type: protein A; Residues: 53-81 < TSU>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Molecule type: protein A; Residues: 53-81 < THO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               J. Biol. Chem. 264, 12826-1; A; Title: Complete sequences A; Reference number: A92732; A; Accession: A32614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Cross-references: GB:J04040; NID:g183269; PIDN:AAA52567.1; R;Orskov, C.; Bersani, M.; Johnsen, A.H.; Hojrup, P.; Holst, J. Biol. Chem. 264, 12826-12829, 1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Molecule type: mRNA
A; Residues: 1-180 < DRU>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            J. Biol. Chem. 263, 13475-13478, 1988
A;Title: Glucagon gene expression in vertebrate brain
A;Reference number: A30875; MUID:88330860
A;Accession: A30875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  R; Tsugita, A.; Takamoto, K.; Kamo, M.; Iwadate,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Accession: A01541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Reference number: A91373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          R; Drucker, D.J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Cross-references: GB:V01515; NID:g31777;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Residues: 1-179 <BEL>
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A; Residues: 1-180 <WHI>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Reference number: A24377; MUID:86259053
A;Accession: A24377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
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                                                                                                                                        Genetics:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         precursor [validated] -
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ecursor [validated] - human
glicentin; glicentin-related
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                                           GDB:119265;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      of glucagon-like peptide-1 from human and pig small intestir \mathtt{MUID:89327238}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    K.; Brunfeldt, K.; Sundby,
                                           OMIM: 138030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               R.; Laybourn,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         of
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Pred. No. 1.1e-13;
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HAEGTFTSDVSSYLEGQAAKEFIAWLVK 28

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C.Species: Cavia porcellus (quinea pig)
C.Date: 30-Sep-1987 #sequence_revision 31-Dec-1992 #text_change 16-Jun-2000
C.Accession: A24856; A23849; A60323
R:Seino, S:, Welsh, M.; Bell, G.I.; Chan, S.J.; Steiner, D.F.
FBBS Lett. 203, 25-30, 1986
A;Title: Mutations in the guinea pig preproglucagon gene are restricted to A.Reference number: A24856; MUID:86248118
A;Accession: A24856; MUID:86248118
                                                                                                                                                                                                                                                               F;1-20/Domain: signal sequence #status predicted <SIG>F;1-10/Domain: signal sequence #status predicted <FGFF;21-180/Product: proglucagon #status predicted estatus predicted F;21-50/Region: glicentin-related peptide #status predicted F;53-89/Product: glucagon-37 (oxyntomodulin) #status experimental <G37>F;53-89/Product: glucagon-37 (oxyntomodulin) #status experimental <G37>
                                                                                                                                                                                                                                                                                                                                                                                                                   A;Molecule type: protein
A;Residues: 53-81 <CON>
A;Residues: 53-81 <CON>
C;Superfamily: glucagon as not completely sequenced
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(;Superfamily: glucagon
C;Keywords: amidated carboxyl end; carbohydrate metabolism; dupli
F;1-20/pomain: signal sequence #status predicted <SIG>
F;21-180/Product: proglucagon #status experimental <GIN>
F;21-89/Product: glicentin #status experimental GIN>
F;21-50/Product: glicentin-related polypeptide #status predicted
F;53-89/Product: oxyntomodulin #status experimental <OXN>
                                                                                                                                                F;53-81/Product: glucagon #status experimental <GCN>F;98-127/Product: glucagon-like peptide 1 #status predicted <F;146-178/Product: glucagon-like peptide 2 #status predicted F;146-178/Product: glucagon-like peptide 2 #status predicted F;127/Modified site: amidated carboxyl end (Arg) (amide in ma
                                                                                                                                                                                                                                                                                                                                                                                          C; Keywords: amidated carboxyl end; carbohydrate metabolism;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Reference number: A60323; A; Accession: A60323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           R;Conlon, J.M.; Hansen, H.F.; Regul. Pept. 11, 309-320, 1985
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A, Title: Guinea pig glucagon differs from A, Reference number: A23849; MUID:86165412 A, Accession: A23849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Cross-references: DDBJ:D00014; GB:N00014; NID:g220288; PIDN:BAA00010.1; PID:g220289 R;Huang, C.G.; Eng, J.; Pan, Y.C.E.; Hulmes, J.D.; Yalow, R.S. Diabetes 35, 508-512, 1986
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Molecule type: protein A; Residues: 53-81 < HUA>
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A; Residues: 1-180 <SEI>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N; Alternate names: oxyntomodulin
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      Matches
                                 Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Primary structure of glucagon and a nce number: A60323; MUID:86017849
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       glicentin-related peptide; glucagon; glucagon-37 (oxyntomodulin);
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ilarity 100.
Conservative
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                              Score 144;
Pred. No. 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 144; DB 1;
Pred. No. 1.3e-13;
   Mismatches
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DB 1;
..3e-13;
s 0;
                                                    Length 180;
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   Indels
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                                                                                                                                                                                                              <GL1>
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                                                                                                                                                                                  <GL2>
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   0,
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A; Molecule type: DNA
A; Residues: 1-180 <hEI>
A; Cross-references: EMBL; K02809
A; Note: the authors translated the codon TTG
R; Mojsov, S.; Heinrich, G.; Wilson, I.B.; Rav
J. Biol. Chem. 261, 11880-11889, 1986
A; Title: Preproglucagon gene expression in pa
A; Reference number: A25190; MUID: 86304324
A; Accession: A25190
A; Status: not compared with conceptual transl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N;Contains: glicentin-related Popularistics (Norway rat) C;Species: Rattus norvegicus (Norway rat) C;Date: 30-Sep-1987 #sequence_revision 30 C;Accession: A22655; A25190; A44198 R;Heinrich, G; Gros, P.; Habener, J.F. J. Biol. Chem. 259, 14082-14087, 1984
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C:Keywords: amidated carboxyl end; carbohydrate metabolism; duplication; F;1-20/Domain: signal sequence #status predicted <SIG>F:21-180/Product: proglucagon #status predicted <PGC>F:21-50/Region: glicentin-related peptide #status predicted FE;31-50/Region: glicentin-related peptide #status predicted F;53-81/Product: glucagon #status predicted <CGN>F;38-127/Product: glucagon-11ke peptide 1 #status predicted <GLI>F;146-178/Product: glucagon-11ke peptide 2 #status predicted <GLI>F;147/Modified site: amidated carboxyl end (Arg) (amide in mature form fi
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C;Species: Octodon degus (degu)
C;Date: 31-Mar-1993 #sequence_revision
A; Residues: Î-180 < A; Cross-references: C; Genetics:
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A:Accession: C36118
A:Molecule type: mRNA
A:Residues: 1-180 <NIS>
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C;Accession: C3bliv
R;Nishi, M.; Steiner, D.F.
Principal 4, 1192-1198, 1990
Princip
                                                                                          A; Accession: A44198
A; Status: prelimina
A; Molecule type: mRI
                                                                                                                                                                                                                                                     A; Molecule type: mRNA
A; Residues: 1-180 <MOJ>
R; Helarich, G; Gros, P; Lund, P.K.; Bentley, R.C.;
Endocrinology 115, 2176-2181, 1984
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   glucagon precursor - rat
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                                                                                                                                                                                        A; Title: Pre-proglucagon messenger ribonucleic A; Reference number: A44198; MUID:85051023
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                                                                                                                            preliminary
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  glicentin-related peptide; glucagon; glucagon-like peptide 1; glucagon-like
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                                                                   <HE2>
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                                 GB:K02809;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MUID:85054853
                                                                                                                                                                                                                                                                                                                                                                                 conceptual translation
                              GB:K02810; GB:K02811;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 144; DB 1; Pred. No. 1.3e-13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                               pancreas
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                              GB:K02812
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L.;
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A;Introns: 31/2; 85/2; 131/2; 179/2
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; carbohydrate metabolism;
F;1-20/Domain: signal sequence #status predicted <SIG>
F;21-180/Product: proglucagon #status predicted <PGC>
F;21-50/Region: glicentin-related peptide #status predicted
F;1-50/Region: glicentin-related peptide #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Cross-references: EMBL:J00059
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; carbohydrate metabolism; duplica
F;1-20/Domain: signal sequence #status predicted <STG>
F;21-180/Product: proglucagon #status predicted <PGC>
F;21-50/Region: glicentin-related peptide #status predicted
F;31-81/Product: glucagon *status predicted <GCN>
F;98-127/Product: glucagon-like peptide 1 #status predicted <GL1>
F;146-180/Product: glucagon-like peptide 2 #status predicted <GL2>
F;127/Modified site: amidated carboxyl end (Arg) (amide in mature 1
                                                                                                                                                                                            N;Contains: glicentin-related peptide; glucagon; glucagon-like peptide 1; glucagon-li C;Species: Bos primigenius taurus (cattle) C;Species: 14-Nov-1983 #sequence_resion 14-Nov-1983 #text_change 20-Mar-1998 C;Accession: A94970; A92081; A01538 R;Lopez, L.C.; Frazier, M.L.; Su, C.J.; Kumar, A.; Saunders, G.F. Proc. Natl. Acad. Sci. U.S.A. 80, 5485-5489, 1983
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  glucagon precursor - golden hamster N;Contains: glicentin-related peptide; glucagon; glucagon-like p C;Species: Mesocricetus auratus (golden hamster) C;Date: 13-Jun-1983 #sequence_revision 13-Jun-1983 #text_change C;Accession: A01539 R;Bell, G.I.; Santerre, R.F.; Mullenbach, G.T. Nature 302, 716-718, 1983
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  F;53-81/Product: glucagon #status predicted <GCN>F;98-127/Product: glucagon-like peptide 1 #status predicted <GL1>F;146-180/Product: glucagon-like peptide 2 #status predicted <GL2>F;127/Modified site: amidated carboxyl end (Arg) (amide in mature
                                          A; Molecule type: mRNA
A; Residues: 1-180 <LOP>
A; Cross-references: EMBL: K00107
                                                                                                                       Proc. Natl. Acad. Sci. U.S.A. 80, 5485-5489, A;Title: Mammalian pancreatic preproglucagon A;Reference number: A93970; MUID:83299996 A;Accession: A93970
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Molecule type: mRNA
A; Residues: 1-180 <BEL>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Title: Hamster preproglucagon contains the A; Reference number: A01539; MUID:83167563
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                                                                                                                                                                                                                                                                                                                                                           precursor - bovine
                     W.W.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HAEGTFTSDVSSYLEGQAAKEFIAWLVK 125
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28; Conserv
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Boucher, M.E.;
246, 2822-2827,
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  Koffenberger
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Pred. No. 1.
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Pred. No. 1
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s 0;
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A; Molecule type: protein
A; Residues: 53-81 < BRO>
C; Superfamily: glucagon
C; Superfamily: glucagon
C; Keywords: amidated carboxyl end; carbohydrate metabolism; duplication; hormone; pancre
F; 1-20/Domain: signal sequence #status predicted <SIG>
F; 21-180/Product: proglucagon #status predicted <PGC>
F; 21-50/Region: glicentin-related peptide #status predicted
F; 55-81/Product: glucagon #status experimental <GCN>
F; 98-127/Product: glucagon-like peptide 1 #status experimental <GL1>
F; 146-178/Product: glucagon-like peptide 2 #status predicted <GL2>
F; 127/Modified site: amidated carboxyl end (Arg) (amide in mature form from following gl
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G:Species: Mus musculus (house mouse)

C;Species: Mus musculus (house mouse)

C;Date: 01-Dec-1995 #sequence_revision 01-Dec-1995 #text_change 16-Jul-1999

C;Accession: A57294; S49903

R;Rothenberg, M.E.; Eilertson, C.D.; Klein, K.; Zhou, Y.; Lindberg, I.; McDonald, J.K.;

J. Biol. Chem. 270, 10136-10146, 1995

J. Biol. Processing of mouse proglucagon by recombinant prohormone convertase 1 and immu A;Reference number: A57294; MUID:95247722

A;Reference number: A57294; MUID:95247722

A;Accession: A57294

A;Status: preliminary

A;Molecule type: mRNA

A;Residues: 1-180 <ROT>

A;Residues: 1-
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A;Reference number: A92081;
A;Accession: A92081
                                                                                                                                                                                                                                                                                                                                                                             glucagon precursor - chicken
N;Contains: glucagon; glucagon-like peptide 1
C;Species: Gallus gallus (chicken)
C;Species: Gallus gallus (chicken)
C;Accession: S09992; A92189; A60836; A01542
C;Accession: S09992; A92189; A60836; A01542
C;Accession: S09992; A92180; A60836; A01542
R;Hasegawa, S; Terazono, K; Nata, K; Takada, T.; Yamamoto, H.; Okamoto, H.;BSS Lett. 264, 117-120, 1990
A;Title: Nucleotide sequence determination of chicken glucagon precursor cDN A;Reference number: S09992; MUID:90249492
A;Accession: S09992; MUID:90249492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Cross-references: EMBL:246845; NID:g599880; PIDN:CAA86902.1; PID:g599881
C;Superfamily: glucagon
C;Keywords: carbohydrate metabolism; duplication; hormone; pancreas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT
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J. Biol. Chem. 250, 9377-9380, 1975
A;Title: Chicken glucagon. Isolation and amino acid sequence studies. A;Reference number: A92189; MUID:76069271
A;Accession: #92189,
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                                                                                                                                                                    R; Pollock, H.G.; Kimmel, J.R.
J. Biol. Chem. 250, 9377-9380, 1975
                                                                                                                                                                                                                                                                                                    A; Molecule type: mRNA
A; Residues: 1-151 <HAS>
                                                                                                                                                                                                                                                      A;Cross-references: EMBL:Y07539; NID:g63749; PIDN:CAA68827.1; PID:g63750
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28; Conservative
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Pred. No. 1.3e-13;
; Mismatches 0;
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R:Huang, J.; Eng, J.; Yalow, R.S.
Horm. Metab. Res. 19, 542-544, 1987
A;Title: Chicken glucagon: sequence and potency in receptor assay.
A;Reference number: A60836; MUID:88113418
A;Accession: A60836
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C;Superfamily: glucagon
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; carbohydrate metabolism; duplication; hormone; pan
C;Keywords: amidated carboxyl end; carbohydrate selected csic>
F;123/Domain: signal sequence #status predicted csic>
F;23-151/Product: proglucagon #status predicted csic>
F;53-93/Product: glucagon #status experimental csicN>
F;118-147/Product: glucagon-like peptide 1 #status predicted csic>
F;1147/Modified site: amidated carboxyl end (Arg) (amide in mature form from following
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A; Accession: I51301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         R; Irwin, D.M.; Wong, J.
Mol. Endocrinol. 9, 267-277, 1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   proglucagon - chicken
C;Species: Gallus gallus (chicken)
C;Date: 13-Sep-1996 #sequence_revision 13-Sep-1996 #text_change 16-Jul-1999
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                                                                                                                                                                                                                               glucagon-like peptide - American eel c;Species: Anguilla rostrata (American C;Date: 10-Mar-1994 #sequence_revision c;Accession: B61125 P.C.; Thim, L.R;Conlon, J.M.; Andrews, P.C.; Thim, L.Gon Comp Fadorainal 82, 23-32, 1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C; Keywords: duplication
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Cross-references: GB:S78477; NID:g999386; PIDN:AAB34506.1; PID:g999387 C;Superfamily: glucagon
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A;Molecule type: mRNA
A;Residues: 1-206 <IRW>
                                                                                                                                      Gen. Comp. Endocrinol. 82, 23-32, 1991
A; Title: The primary structure of glucagon-like peptide
A; Reference number: A61125; MUID:91340068
A; Accession: B61125
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                 C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duplication
F;1-30/Product: glucagon-like peptide #status
                                                                                        A; Molecule type: protein
A; Residues: 1-30 <CON>
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F;30/Modified site: amidated carboxyl end (Arg) #status predicted
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Pred. No. 6.1e-12;
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10-Mar-1994 #text_change
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1 HAEGTFTSDVSSYLEGQAAKEFIAWL 26

HAEGTYTSDVSSYLQDQAAKEFVSWL 26

Query Match
Best Local Similarity

81.9%;

Score 118; Pred. No. 1

DB 2; ..2e-10;

Length 30 Indels

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Gaps

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21;

Conservative

4; Mismatches

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glucagon-like peptide - European eel glucagon-like peptide - European eel)
C;Species: Anguilla anguilla (European eel)
C;Date: 10-Mar-1994 #sequence_revision 10-Mar-1994 #text_change 21-Nov-1997
C;Accession: C61125
R;Conlon, J.M.; Andrews, P.C.; Thim, L.; Moon, T.W.
Gen. Comp. Endocrinol. 82, 23-32, 1991
A;Title: The primary structure of glucagon-like peptide but not insulin has been A;Reference number: A61125; MUID:91340068
A;Reference number: A61125; MUID:91340068
A;Accession: C61125
A;Molecule type: protein
A;Residues: 1-30 <CON>
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duplication
F;1-30/Product: glucagon-like peptide #status experimental <GLP>
F;30/Modified site: amidated carboxyl end (Arg) #status experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 glucagon precursor - bullfrog (fragments)

N;Alternate names: oxyntomodulin

N;Alternate names: oxyntomodulin

N;Contains: glucagon; glucagon-36 (oxyntomodulin); glucagon-like peptide 1; glucagon-lik

C;Species: Rana catesbeiana (bullfrog)

C;Date: 31-Mar-1993 #sequence_revision 31-Mar-1993 #text_change 20-Mar-1998

C;Accession: B28091; C28091; D28091

R;Pollock, H.G; Hamilton, J.W.; Rouse, J.B.; Ebner, K.E.; Rawitch, A.B.

J. Biol. Chem. 263, 9746-9751, 1988

J. Biol. Chem. 263, 9746-9751, 1988

A;Fitle: Isolation of peptide hormones from the pancreas of the bullfrog (Rana catesbeia A;Reference number: A92730; MUID:88257102

A;Accession: B28091

A;Rocession: B28091

A;Rocession: C7002>

A.Accession: C7001
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A; McCession: C28091
A; McCession: D28091
C; Superfamily: glucagon
C; Keywords: carbohydrate metabolism; duplication; hormone; pancreas
C; Keywords: carb
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1 HAEGTFTSDVSSYLEGQAAKEFIAWLVK 28
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Pred. No. 4.5e-10;
Pred. No. 4.5e-2;
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C:Species: Lophius americanus (American goosefish)
C;Date: 31-Mar-1993 #sequence_revision 31-Mar-1993
C;Accession: A05150
R;Lund, P.K.; Goodman, R.H.; Montminy, M.R.; Dee, P
J. Biol. Chem. 258, 3280-3284, 1983
A;Title: Anglerfish islet pre-proglucagon II. Nucle
A;Reference number: A05150; MUID:83135785
A;Accession: A05150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       J. Biol. Chem. 260, 3910-3914, 1985
A;Title: Isolation and structures of glucagon and
A;Reference number: A92514; MUID:85157536
A;Accession: A05166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            glucagon precursor - channel catfish (fragments) C:Species: Ictalurus punctatus (Channel catfish) C:Date: 31-Mar-1993 #sequence_revision 31-Mar-1993 C:Accession: A05166; A05167
   B
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F;89-119/Product: glucagon-like peptide 1 #status predicted <GLl>
                                                                                                                                                                                                 C;Superfamily: glucagon
C;Keywords: carbohydrate metabolism; duplication; hormone;
F;1-21/Domain: signal sequence #status predicted <SIG>
F;22-122/Product: proglucagon 2 #status predicted <PGC2>
                                                                                                                                                                                                                                                                                A;Molecule type: mRNA
A;Residues: 1-122 <LUN>
A;Cross-references: GB:J00933; NID:g64021; PIDN:CAA23905.1;
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N;Contains: glucagon; glucagon-like peptide 1
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J. Biol. Chem. 2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local
             CELL
                                                                                                                                                    "Mammalian pancreatic peptides ";
                                                                                                                                                                                                                                                                                                 13-AUG-1987 (Rel. 05, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Glucagon precursor [Contains: Glicentin-related polypeptide (GRPP);
Glucagon; Glucagon-like peptide 1 (GLP1); Glucagon-like peptide 2
                                                                                                                                                                                                                                                                                                                                                                               LT 2
BOVIN
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                                                                             MEDLINE=71166445; PubMed=5102927; Bromer W.W., Boucher M.E., Koffenberger Panino acid sequence of bovine glucagon. J. Biol. Chem. 246:2822-2827(1971).
                                                                                                                                                                               MEDLINE=83299996; Pu
Lopez L.C., Frazier
                                                                                                                                                                                                                                                                                                                        21-JUL-1986 (Rel. 01,
13-AUG-1987 (Rel. 05,
16-OCT-2001 (Rel. 40,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HELIX
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PDB;
                                                -
                                                                                                                                                                                                                                                Mammalia;
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                                                                                                                          SEQUENCE OF 53-81.
                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                          NCBI_TaxID=9913;
                                                                                                                                                                                                                                       Bovidae;
                                                                                                                                                                                                                                                          Eukaryota;
                                                                                                                                                                                                                                                                      Bos taurus
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                                                                                                                                                                                                                                                                                           (GLP2)].
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BIOL Chem. 246:2822-282/(1971).

FUNCTION: GLUCAGON PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPTLOS, FRAISES THE BLOOD SUGAR LEVEL.

RAISES THE BLOOD SUGAR LEVEL.

FUNCTION: GLP2 STIMULATES INVESTINAL GROWTH AND UPREGULATES VILITIESTION.

HEIGHT IN THE SMALL INVESTIME, CONCOMMITANT WITH INCREASED CRYPT

A_CELL PROLIFERATION AND DECREASED ENTEROCYTE APOPTOSIS.

TANDICTION: PRODUCED IN THE A CELLS OF THE ISLETS OF LANGERHANS
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MISCELLANEOUS: X'S IN THE SEQUENCE WERE INCLUDED BY HOMOLOGY WITH
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1GCN; 30-SEP-
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28; Conser
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ilarity 100.
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er M.L., Su C.-J
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Cetartiodactyla; Ruminantia; Pecora;
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GLUCAGON-LIKE PEPTIDE 2
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Pred. No. 5.7
); Mismatches
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13-AUG-1987 (Rel. 05, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Glucagon precursor [Contains: Glicentin-related polypeptide (GRPP);
Glucagon; Glucagon-37 (Oxyntomodulin); Glucagon-like peptide 1 (GLP
Glucagon-like peptide 2 (GLP2)].
Conlon J.M., Hansen H.F., Schwartz "Primary structure of glucagon and oxyntomodulin (glucagon-37) from th Regul. Pept. 11:309-320(1985).
-!- FUNCTION: GLUCAGON PROMOTES HYI
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                                                                     PARTIAL SEQUENCE OF 53-89
MEDLINE=86017849; PubMed=4
                                                                                                                    MEDLINE=86165412; PubMed=3956884; Huang C.G., Eng J., Pan Y.-C.E., "Guinea pig glucagon differs from Diabetes 35:508-512(1986).
                                                                                                                                                                               SEQUENCE OF 53-81.
                                                                                                                                                                                                                          specific
                                                                                                                                                                                                                                                                       MEDLINE=86248118;
                                                                                                                                                                                                                                                                                     SEQUENCE FROM
                                                                                                                                                                                                                                                                                                     NCBI_TaxID=10141;
[1]
                                                                                                                                                                                                                                                                                                                                  Eukaryota;
Mammalia; I
                                                                                                                                                                                                                                                                                                                                                           Cavia porcellus (Guinea pig).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              entities requires a license agreement (S or send an email to license@isb-sib.ch).
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HSSP; P01274; 1GCN
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                                                                                                                                                                                                           Weish M., Bell G.I., Chan S.J., St
nas in the guinea pig preproglucagon
portion of the prohormone sequence.
t. 203:25-30(1986).
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Conservative
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Pred. No. 6.6
Mismatches
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                                                                                                                                  J.D., Yalow R. mammalian gluc
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13-AUG-1987 (Rel. 05, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Glucagon precursor [Contains: Glicentin-related polypeptide (GRPP);
Glucagon; Glucagon-like peptide 1 (GLP1); Glucagon-like peptide 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens (Human)
Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRINTS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION-!- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PIR; A24856; GCGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         the European Bioinformatics Institute.
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                                      SEQUENCE FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Drucker D.J., Asa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=88330860; PubMed=2901414;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro; IPR000532; Glucagon.
                                                                                                                        Nucleic
                                                                                                                                                                                                                                                                                                                                                                                                            "Glucagon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (GLP2)].
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   86
                                                                                                                                                                                                                                                                                                                                                                              Biol.
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FUNCTION: GLD2 STIMULATES INTESTINAL GROWTH AND UPREGULATES VILLUS
HEIGHT IN THE SMALL INTESTINE, CONCOMITANT WITH INCREASED CRYPT
CELL PROLIFERATION AND DECREASED ENTEROCYTE APOPTOSIS.
INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF LANGERHANS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SWISS-PROT entry is copyright. It is produced through a collaboration een the Swiss Institute of Bioinformatics and the EMBL outstation - European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HAEGTFTSDVSSYLEGQAAKEFIAWLVK 125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PF00123; hormone2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      P01274; 1GCN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       n family; Hormone; Cleavage o

1 20
21 50 GLICENT
53 81 GLUCAGO
53 89 GLUCAGO
92 128 GLUCAGO
92 128 GLUCAGO
146 178 GLUCAGO
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                                                                                                                                                                                                                                                                                                                                                                                                                gene
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(hordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                           N.A.
                                                                                                                        the human
Res. 14:47
                                                                                                                                                                                                                                                                                                                                                                 expression in vertebra
263:13475-13478(1988)
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                                                                                                                                                                                                                                            PubMed=3725587
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                                                                                                                        human glucagon gene.";
14:4719-4730(1986).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100
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                                                                                                                                                                                                          G.F.;
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                                                                                                                                                                                                                                                                                                                                                                                                                in vertebrate brain.";
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GLUCAGON.
GLUCAGON-37.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 144; DB 1;
Pred. No. 6.6e-14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 180;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
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STITITIES WORRER REPRESENTATION OF THE STREET AND DESCRIPTION OF T
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J. Med. Chem. 41:2693-2700(1998).

-!- FUNCTION: GLUCAGON PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sturm N.S., Lin Y., Burley S.K., Krstenansky Azizeh B.Y., Trivedi D., Hruby V.J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE OF 53-81.
Thomsen J., Kristlansen K., Brunfe Thomsen J., kristlansen de fuman en The Amino acid sequence of human FEBS Lett. 21:315-319(1972).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=83271477; PubMed=6877358; Bell G.I., Sanchez-Pescador R., L "Exon dupilcation and divergence Nature 304:368-371(1983).
              CONFLICT
                                                                                       BEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    entities requires a license agreement (S or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <del>-</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE=98334683;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Small
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                                                                                                                                                                                                                                                                                                                                       InterPro; IPR000532; Glucagon
Pfam; PF00123; hormone2; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PIR; A24377; GCHU.
PIR; S23309; S23309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL;
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                                                                                                                                                                                                                                                                                    SMART;
                                                                                                                                                                                                                                                                                                           PRINTS;
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                                                                BULLABA
                                                                                                                                               PEPTIDE
                                                                                                                                                                              SIGNAL
                                                                                                                                                                                                     Pharmaceutical
                                                                                                                                                                                                                              31ucagon
                                                                                                                                                                                                                                                        PROSITE; PS00260; GLUCAGON;
                                                                                                                                                                                                                                                                                                                                                                                            MIM; 231530;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Biol. Chem.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF LANGERHANS IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION.

PHARMACEUTICAL: Available under the names Glucagon (Eli Lilly) and Glucagen or Glucagon Novo Nordisk (Novo Nordisk). Used to treat severe hypoglycemia in insulin-dependent diabetics.

SIMILARTY: BELONGS TO THE GLUCAGON FAMILY.

DATABBASE: NAME-Glucagon at Eli Lilly;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FUNCTION: GLP2 STIMULATES INTE HEIGHT IN THE SMALL INTESTINE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NOTE-Clinical information on Eli Lilly glucagon products; www-"http://www.lillyDiabetes.com/Products/PatientInfo.cfm"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CELL PROLIFERATION AND DECREASED ENTEROCYTE APOPTOSIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RAISES THE BLOOD SUGAR LEVEL.
FUNCTION: GLP2 STIMULATES INTESTINAL GROWTH AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              J04040; AAA52567.1; -. X03991; CAA27627.1; -. V01515; CAA24759.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        intestine.
                                                                                                                                                                                                                                                                                 ; PR00275; GLUCAGON. SM00070; GLUCA; 3.
                                                                                                                                                                                                                         family;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  18-NOV-98
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              AA;
                                                                                                                                                                                                     3D-structure
20
50
81
127
178
82
20909 .
                                                                                                                                                                                                                            Hormone; Cleavage on pair of basic residues; Signal;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PubMed=9667960;
              MW;
           GLICENTIN-RELATED POLYPEP GLUCAGON.
GLUCAGON-LIKE PEPTIDE 1.
GLUCAGON-LIKE PEPTIDE 2.
GLUCAGON-LIKE PEPTIDE 2.
K -> N (IN REF. 3).
K -> N (IN REF. 3).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            glucagon.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hoejrup P., Holst J.J.; peptide-1 from human an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         53-81
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                   CRC64
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RESULT
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    Query Match
Best Local S
Matches 28
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P01273;
21-JUL-1986
                                                                                                                                                           PEPTIDE
PEPTIDE
PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         the Buropean Bioinformatics Institute. The use by non-profit institutions as long modified and this statement is not removed. entities requires a license agreement (See
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21-JUL-1986 (Rel. 01, Created)
01-FEB-1996 (Rel. 33, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Glucagon precursor [Contains: Glicentin-related polypeptide (GRPP);
Glucagon; Glucagon-like peptide 1 (GLP1); Glucagon-like peptide 2
                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                EMBL; J00059; AAA37074.1;
PIR; A01539; GCHY.
HSSP; P01274; IGCN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            This SWISS-PROT entry is copyright. It is produced through a between the Swiss Institute of Bioinformatics and the EMBI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MESAU
                                                                                                                                                                                                                                  SIGNAL
                                                                                                                                                                                                                                                       GLucagon
                                                                                                                                                                                                                                                                           PROSITE;
                                                                                                                                                                                                                                                                                                SMART; SM00070;
                                                                                                                                                                                                                                                                                                                  PRINTS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Submitted (XXX-1985)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bell G.I., Santerre R.F., Mullenbach "Hamster preproglucagon contains the related peptides", Nature 302:716-718(1983).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A. MEDLINE=83167563; PubMed=6835407;
                                                                                                                                                                                                                                                                                                                                                              InterPro; IPR000532; Glucagon.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REVISIONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=10036;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (GLP2)].
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        98
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FUNCTION: GLP2 STIMULATES INTESTINAL GROWTH AND UPREGULATES VILLUS HEIGHT IN THE SMALL INTESTINE, CONCONTANT WITH INCREASED CRYPT CELL PROLIFERATION AND DECREASED ENTEROCYTE APOPTOSIS.

INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF LANGERHANS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mitted (XXX-1985) to the EMBL/GenBank/DDBJ databases. FUNCTION: GLUCAGON PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, AND RAISES THE BLOOD SUGAR LEVEL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SIMILARITY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HAEGTFTSDVSSYLEGQAAKEFIAWLVK 28
                                                                                                                                                                                                                                                                                                                                           PF00123;
    28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION.
MILARITY: BELONGS TO THE GLUCAGON FAMILY.
                           Similarity
                                                                                                                                                                                                                                                                                                                PR00275;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                         PS00260; GLUCAGON;
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    Conservative
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                                                                                                                                                                                                                                                                                                                  GLUCAGON.
                                                                                                                                                                                                                                                    Hormone;
                                                                                                                                         20
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81
128
178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         license agreement (See http://www.isb-sib.ch/announce/
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                                                                                                                    20954
                         100.0%;
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                                                .0%;
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                                                                                                           GLICENTIN-RELATED POLYPEPTIDE GLUCAGON.
GLUCAGON-LIKE PEPTIDE 1.
GLUCAGON-LIKE PEPTIDE 2.
; 02791B49D7AADD4B CRC64;
                         Score 144; DB 1;
Pred. No. 6.6e-14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Cricetinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred. No. 6.
Mismatches
                                                                                                                                                                                                                                                  on pair of basic residues; Signal
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sequence of glucagon and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180 AA
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    0;
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                                           Length 180;
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RESULT 6
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P55095;
P55095;
P55095;
O1-OCT-1996 (Rel. 34, Created)
O1-OCT-1996 (Rel. 34, Last sequence update)
O1-MAR-2002 (Rel. 41, Last annotation update)
O1-MAR-2002 (Rel. 41, Last annotation update)
Glucagon precursor [Contains: Glicentin-related polypeptide (GRPP);
Glucagon; Glucagon-like peptide 1 (GLP1); Glucagon-like peptide 2
                                                                                                                                          PEPTIDE
PEPTIDE
PEPTIDE
                                                                                                                                                                                                            Glucagon
SIGNAL
                                                                                                                                                                                                                                                                                                                                                                   EMBL; Z46845; CAA86902.1; -
EMBL; AF276754; AAK96898.1;
HSSP; P01274; IGCN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -i- FUNCTION: GLP2 STIMULATES INTESTINAL GROWTH AND UPREGULATES VII
HEIGHT IN THE SMALL INTESTINE, CONCONTRAIT WITH INCREASED CRYPY
CELL PROLIFERATION AND DECREASED.
-i- INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF LANGERHANS
IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION.
-i- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "Mouse glucagon full length cDNA.";
Submitted (JUN-2000) to the EMBL/GenBank/DDBJ databases.
-!- FUNCTION: GLUCAGON PROMOTES HYDROLYSIS OF GLYCOGEN A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TISSUE-Pancreatic islets;

MEDLINE=95247722; PubMed=7730317;

Rothenberg M.E., Ellertson C.D., Klein K., Zhou Y., Linberg I.,

Rothenberg M.E., Silertson C.D., Wiein K., Zhou Y., Linberg I.,

McDonald J.K., Mackin R.B., Noe B.D.;

"Processing of mouse proglucagon by recombinant prohormone convertase
1 and immunopurified probormone convertase 2 in vitro.";

J. Biol. Chem. 270:10136-10146(1995).
                                                                                                      SEQUENCE
                                                                                                                                                                                                                                                                                                              Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This
                                                                                                                                                                                                                                                                     PRINTS; PR00275; GLUCAGON. SMART; SM00070; GLUCA; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                          or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GLUC_MOUSE
                                                                                                                           PEPTIDE
                                                                                                                                                                                                                                                    PROSITE;
                                                                                                                                                                                                                                                                                                                               MGD; MGI:95674; Gcg.
InterPro; IPR000532; Glucagon.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     the European Bioinformatics Institute.
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Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RAISES THE BLOOD SUGAR LEVEL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SWISS-PROT entry is copyright. It is produced through sen the Swiss Institute of Bioinformatics and the EN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HAEGTFTSDVSSYLEGQAAKEFIAWLVK
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                                                                                                                                                                                                                                                                                                              PF00123; hormone2;
    28;
                                                                                                                     n family; Hormone; (1) 1 20 21 50 53 81 92 128 146 178
                       Similarity
                                                                                                                                                                                                                                                    PS00260;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                R., Knepel W.;
                                                                                                 21
53
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180
    Conservative
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                                                                                                                                                                                                                                                    GLUCAGON;
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Rodentia;
                                                                                                      20906
                   100.0%;
                                                                                                      WW;
                                                                                                                                                                                                            Cleavage on pair of basic residues; Signal BY SIMILARITY.
                                                                                                                                                                                                                                                    4
  0;
                                                                                                 GLUCAGON-LIKE PEPTIDE GLUCAGON-LIKE PEPTIDE; 595AA6DD9A589950 CRC
                                                                                                                                                                 GLICENTIN-RELATED GLUCAGON.
                 Score 144; DB 1;
Pred. No. 6.6e-14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Craniata; Vertebrata; Sciurognathi; Muridae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  28
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                                                                                                    IDE 1.
IDE 2.
CRC64;
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                                        Length
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; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AND
                                          180;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            collaboration
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Gaps
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Glucagon;
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SEQUENCE
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PEPTIDE
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01-AUG-1991 (Rel. 19, Last sequence update)
01-AUG-1991 (Rel. 19, Last sequence update)
16-CCT-2001 (Rel. 40, Last annotation update)
Glucagon precursor [Contains: Glicentin related polypeptide (GRPP);
Glucagon; Glucagon-like peptide 1 (GLP1); Glucagon-like peptide 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; M57688;
PIR; C36118; C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Entropean Bioinformatics Institute. There are no restude by non-profit institutions as long as its content
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nishi M., Steiner D.F.;
"Cloning of complementary DNAs encodinsulin, and glucagon precursors from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A. MEDLINE-91155952;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Octodon degus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    P22890;
01-AUG-1991
                                                                                                                                                                                                                                                                                                                                                                     Glucagon
                                                                                                                                                                                                                                                                                                                                                                                                                     SMART; SM00070;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HSSP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     modified and this statement is not removed.
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                                                                                                                                                                                                                                                                                                                              SIGNAL
                                                                                                                                                                                                                                                                                                                                                Amidation.
                                                                                                                                                                                                                                                                                                                                                                                            PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                InterPro; IPR000532; Glucagon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (GLP2)
86
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                                      Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FUNCTION: GLP2 STIMULATES INTESTINAL GROWTH AND UPREGULATES VILLUS HEIGHT IN THE SMALL INTESTINE, CONCOMITANT WITH INCREASED CRYPT CELL PROLIFERATION AND DECREASED ENTEROCYTE APOPTOSIS. INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF LANGERHANS IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION.

SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FUNCTION: GLUCAGON PROMOTES HYDROLYSIS RAISES THE BLOOD SUGAR LEVEL.
                    HAEGTFTSDVSSYLEGQAAKEFIAWLVK 28
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                                                                                                                                                                                                                                                                                                                                                                                                                                                         PF00123; hormone2;
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                                                                                                                                                                                                                                                                                                                                                                                                                                       PR00275;
                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                            PS00260;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        complementary DNAs encoding a alucagon precursors from a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; GCRTDU.
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                                                                                                                                                                                                                                                                                                                                                                                                                   GLUCA;
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                                                                                                                                                                                                                                                                                                                                                                                            GLUCAGON;
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Rodentia;
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                                                                                                                                                                                           WW;
                                                                                                                                                                                                                                                                                                                                                                     Cleavage
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                                                                                                                                                                                       GLICENTIN-RELATED POLYPEPTIDE.
GLUCAGON.
GLUCAGON-LIKE PEPTIDE 1.
GLUCAGON-LIKE PEPTIDE 2.
AMIDATION (G-128 PROVIDE AMIDE GROUP).
; 6E8836160A9A3051 CRC64;
                                                                                                    Score 144;
Pred. No. 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Craniata; Vertebrata; Hystricognathi; Octodo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                Mismatches
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New World rode
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Usage
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                                                                                                                         Length
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ent, the deg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              restrictions
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RESULT
GLUC_RAT
  EMBL; KUZBLT.

EMBL; KUZB11; AAA41235.1

EMBL; KUZB12; AAA41235.1

EMBL; KUZB12; GCRT.

R PIR; A44198; A44198.

HSSP; P01274; IGCN.

TRO00532; G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              P06883;
01-JAN-1988
01-JAN-1988
16-OCT-2001
PEPTIDE
PEPTIDE
PEPTIDE
                                         Glucagon
SIGNAL
                                                                                                                                                                                                                       EMBL;
                                                                                                                                                                                                                                                                                                                                                                                 RAISES THE BLOOD SUGAR LEVEL.

-!- FUNCTION: GLP2 STIMULATES INTESTINAL GROWTH AND UPREGULATES VILLUS HEIGHT IN THE SMALL INTESTINE, CONCOMITANT WITH INCREASED CRYPT CELL PROLIFERATION AND DECREASED ENTEROCYTE APOPTOSIS.

-!- INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF LANGERHANS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-JAN-1988 (Rel. 06, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Glucagon precursor [Contains: Glicentin-related polypeptide (GRPP);
Glucagon; Glucagon-like peptide 1 (GLP1); Glucagon-like peptide 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                at the level of post-translational processing.";
J. Biol. Chem. 261:11880-11889(1986).
-!- FUNCTION: GLUCAGON PROMOTES HYDROLYSIS OF GLYCOGEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=85054853; PubMed=6094539; Heinrich G., Gros P., Habener J.F.; "Glucagon gene sequence. Four of six exons domains of rat pre-proglucagon."; J. Biol. Chem. 259:14082-14087(1984).
                                                                                                                                                                                                                                                   entities requires a license agreement (S or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                             modified and this statement
                                                                                                                                                                                                                                                                                                                   This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   amino acid sequences of the rat pancreatic
deoxyribonucleic acid.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rattus norvegicus (1
Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GLUC_RAT
                                                                PROSITE;
                                                                                         PRINTS;
                                                                                                        Pfam;
                                                                                                                                                                                                                                                                                                      between the Swiss Institute of Bioinformatics the European Bioinformatics Institute. There a
                                                                                                                                                                                                                                                                                                                                                           -!- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Preproglucagon gene expression in pancreas and at the level of post-translational processing.":
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Habener J.F.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mojsov S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE=86304324;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Endocrinology 115:2176-2181(1984).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Heinrich G., Gros P., Lund P.K., Bentley R.C., "Pre-proglucagon messenger ribonucleic acid: no
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE=85051023; PubMed=6548696;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM
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                                                                                                                                                                                                                                                                                                                                                              IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION.
                                                                                                                                                                               , K02813; AAA41235.1; K02809; AAA41235.1; K02810; AAA41235.1; K02811; AAA41235.1; K02811; AAA41235.1;
                                                                                                       PF00123; hormone2;
                                                                               SM00070;
                                                                                         PR00275;
                                                                PS00260;
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                                                                              GLUCA;
Hormone;
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Da; Chordata;
ia; Rodentia;
                                                                                         GLUCAGON.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PubMed=3528148;
ch G., Wilson I.B.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         06, Created)
                                                                GLUCAGON;
                                                                                                                                                                                                                                                                             institutions as long as atement is not removed. U
                                                                                                                                                                      JOINED.
JOINED.
JOINED.
                                                    Cleavage on
 GLICENTIN-RELATED POLYGLUCAGON.
GLUCAGON-LIKE PEPTIDE
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Sciurognathi;
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                                                    pair
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                                                                                                                                                                                                                                                                                                      There are no restrictions
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                                                    of basic residues;
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                                                                                                                                                                                                                                                                           Usage
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                                                                                                                                                                                                                                                                                           its content
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; Murinae; Rat
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RESULT 9
GLUC_CHICK
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        J. Biol.
[3]
                                                                                      This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation—the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                       SPECIES-H. gallopavo;
SPECIES-H. gallopavo;
MEDLINE-73074118; PubMed=4645932;
MEDLINE-73074118; PubMed=4645932;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GLUC_CHICK STANDARD; PRT; 151 AA. P01277; P01277; 21-JUL-1986 (Rel. 01, Created) 01-AUG-1990 (Rel. 15, Last sequence update) 15-JUL-1999 (Rel. 38, Last annotation update)
EMBL; Y07539; CAA68827.1;
PIN S09992; GCCH.
PIR; A91740; A91740.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SPECIES-Chicken; TISSUE-Pancreas; MEDLINE-90249492; PubMed-2338135; Hasegawa S., Terazono K., Nata K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PEPTIDE
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Markussen J., Frandsen E.K., Hedin
"Turkey glucagon: crystallization,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gallus gallus (Chicken), and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPOSITION, AND SEQUENCE OF 55-83.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SPECIES=Chicken;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE OF 55-83.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cDNA. Chicken
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Okamoto H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Meleagris gallopavo (Common turkey).
Eukaryota; Metazoa; Chordata; Crania
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pollock H.G., Kimmel J.R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE=76069271; PubMed=1194290;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=9031, 9103;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Archosauria; Aves; Neognathae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Chicken
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "Nucleotide sequence determination of chicken glucagon precursor DNA. Chicken preproglucagon does not contain glucagon-like peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              μ.
                                                                                                                                                                                                                                                                                                                                       INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION. MISCELLANDOUS: THE COMPOSITION OF TURKEY GLUCAGON A IDENTICAL WITH CHICKEN.

MISCELLANDOUS: CHICKEN PREPROGLUCAGON DOES NOT CONTENTS OF THE PROGLUCAGON DOES NOT CONTENTS
                                                                                                                                                                                                                                                                                         GLUCAGON-LIKE PEPTIDE II. SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Lett.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HAEGTFTSDVSSYLEGQAAKEFIAWLVK 125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HAEGTFTSDVSSYLEGQAAKEFIAWLVK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            glucagon. Isolation and am
Chem. 250:9377-9380(1975).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              146
180 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      264:117-120(1990)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.
nilarity 100.
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Isolation and amino acid sequence studies.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              178 (
20846 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 144; DB 1;
Pred. No. 6.6e-14;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Craniata; Vertebrata; Euteleostomi; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Takada T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sundby
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            composition
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                                                                                                                                                                                                                                                                                                                                            CONTAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                       OF LANGERHANS
                                                                                                                                                                                                                                                                                                                                                                                         APPEARS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AND RAISES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
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GLUM_ANGAN
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Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
Matches 24; Conserv
                                                                                          PROSITE; |
Glucagon |
MOD_RES
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CHAIN
PEPTIDE
PROPEP
PEPTIDE
MOD_RES
SEQUENCE
                                                                                                                                                                                                Gen. Comp. EUGOUSS-1- SIMILARITY: BELONGS
                                                                                                                                                                                                                                                                                                                                                       Glucagon-like peptide (GLP)
Anguilla anguilla (European fres
Anguilla rostrata (American eel)
                                                                                                                                                        InterPro; IPR000532; Glucagon.
Pfam; PF00123; hormone2; 1.
                                                                                                                                                                         PIR; B61125; B61125.
PIR; C61125; C61125.
HSSP; P01275; 1BH0.
                                                                                                                                                                                                                   European eel, Anguilla anguilla.";
Gen. Comp. Endocrinol. 82:23-32(1991)
                                                                                                                                                                                                                                      Conlon J.M., Andrews P.C., Thim L., Moon T.W.;
"The primary structure of glucagon-like peptide but not insulin been conserved between the American eel, Anguilla rostrata and
                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Actinopterygii; Neopterygii; Teleostei; Anguilliformes; Anguilloi. Anguillidae; Anguilla.
Anguillidae; Anguilla.
NCBI_TaxID-7936, 7938;
                                                                                                                                                                                                                                                                                                                                                                                       01-NOV-1995 (Rel. 32,
01-NOV-1995 (Rel. 32,
01-NOV-1995 (Rel. 32,
                                                                                                                                                                                                                                                                                                                                                                                                             P41521;
01-NOV-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pfam; PF00123; hormone2;
PRINTS; PR00275; GLUCAGO
SMART; SM00070; GLUCA; 2
                                                                                                                                   PRINTS; PR00275; GLUCAGON. SMART; SM00070; GLUCA; 1.
                                                                                                                                                                                                                                                                        MEDLINE=91340068; PubMed=1874385;
                                                                                                                                                                                                                                                                                               SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                   GLUM_ANGAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROSITE; PS00260; Glucagon family; 1 Amidation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HSSP; P01274; 1GCN
                                                                                                                                                                                                                                                                                     TISSUE=Pancreas;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro; IPR000532;
                                                   Local
Н
         1 HAEGTFTSDVSSYLEGQAAKEFIAWL
                                                            Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 HAEGTFTSDVSSYLEGQAAKEFIAWLV
HAEGTYTSDVSSYLQDQAAKEFVSWL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HAEGTYTSDITSYLEGQAAKEFIAWLV 144
                                                 Similarity
                                                                                                               family; Amidation.
                                                                                                                          PS00260; GLUCAGON; 1.
                                                                                          30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1
23
55
86
118
147
151 ;
                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                          AΑ;
                                                                                                                                                                                                                                                                                                                                                                                                                                  STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hormone; Cleavage on pair
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GLUCAGON.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GLUCAGON;
                                                                                         30
3376 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           22
151
83
118
147
147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      91.7%;
88.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Glucagon.
one2; 2.
                                                  81.9%;
80.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 17520
                                                                                                                                                                                                                                                                                                                                                                                      Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                              Created)
                                                                                                                                                                                                            TO
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                                                                                                                                                                                                            THE
                                        4;
                                                                                                                                                                                                                                                                                                                                                                    freshwater eel), and
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                                                 Score 118; DB 1;
Pred. No. 6.4e-11
                                                                                         AMIDATION.
592DA5EABD6E49D0 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 132;
Pred. No. 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GLUCAGON-LIKE PEPTIDE.
AMIDATION (G-148 PROVIDE
B6C0D87536C0AEB5 CRC64;
                                       Pred. No. 6.4 
; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PROGLUCAGON GLUCAGON.
                                                                                                                                                                                                                                                                                                                                                                                                                                   PRT;
                                                                                                                                                                                                          GLUCAGON FAMILY.
                   26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         27
                                                                                                                                                                                                                                                                                                                                                                                        update)
                                                                                                                                                                                                                                                                                                                                                                                                                                   30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 1,
3.1e-12;
0;
                                                                                                                                                                                                                                                                                                                                     Anguilliformes; Anguilloidei;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   of basic residues;
                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
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                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GROUP).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Signal;
                                                                                                                                                                                                                                         n has
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                                        Gaps
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RESULT

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RESULT 12
GLU2_LOPAM
                                                                                                                                                                                                                                                                                                                              Qy
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                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                            PEPTIDE
PEPTIDE
PEPTIDE
NON_CONS
PEPTIDE
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GLUC_RANCA STANDARD; PRT; 1
PL5438; P15439; P15440;
O1-APR-1990 (Rel. 14, Created)
O1-JUL-1993 (Rel. 26, Last sequence up
O1-JUL-1993 (Rel. 26, Last annotation
                                                                                                                                                  01-NOV-1986 (Rel. 03, Created)
01-NOV-1986 (Rel. 03, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Glucagon II precursor [Contains: Glicentin related glucagon II; Glucagon-like peptide II].
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           THE BLOOD SUGAR LEVEL.

-I TADUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF IN BLOOD SUGAR CONCENTRATION.

-I MISCELLANEOUS: X'S IN THE SEQUENCE WERE INCLUDED BY OTHER SPECIES SEQUENCES.

-I SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE=88257102; PubMed=3260236; Pollock H.G., Hamilton J.W., Rouse J.B., Ebner K.E., Rawitch A.B.; "Isolation of peptide hormones from the pancreas of the bullfrog (Rana catesbelana). Amino acid sequences of pancreatic polypeptide, oxyntomodulin, and two glucagon-like peptides."; J. Biol. Chem. 263:9746-9751(1988).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Glucagon precursor (Fragments).
Rana catesbeiana (Bull frog).
Eukaryota, Metazoa; Chordata; Craniata; Vertebrata;
Amphibia; Batrachia; Anura; Neobatrachia; Ranoidea;
"Anglerfish islet pre-proglucagon amino acid sequence of the cDNA.";
J. Biol. Chem. 258:3280-3284(1983)
                                                   SEQUENCE FROM N.A. MEDLINE=83135785; PubMed=6338015;
                                                                                                   Lophius americanus (American goosefish) (Anglerfish),
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
Acanthomorpha; Paracanthopterygii; Lophiiformes; Lophiidae; Lophiu
                                                                                                                                                                                                                                         GLU2_LOPAM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRINTS; PR00275; GLUCAGON. SMART; SM00070; GLUCA; 3.
                                                                                                                                                                                                                            P04092;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Glucagon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -!- FUNCTION: PROMOTES HYDROLYSIS OF GLYCOGEN AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TISSUE=Pancreas;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE
                                      Lund P.K., Goodman R.H.,
                                                                                           NCBI_TaxID=8073;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HSSP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=8400;
                                                                                                                                                                                                                                                                                                         39
                                                                                                                                                                                                                                                                                                                      1 HAEGTFTSDVSSYLEGQAAKEFIAWLVK 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B28091; GCFGB.
                                                                                                                                                                                                                                                                                                        HADGTFTSDMSSYLEEKAAKEFVDWLIK 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pro; IPR000532; Glucagon. PF00123; hormone2; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      P01274; 1GCN
                                                                                                                                                                                                                                                                                                                                                                                                                          n family; Hormone. G
                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PS00260;
                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                         STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GLUCAGON; 3
                                                                                                                                                                                                                                                                                                                                                                      81.9%;
75.0%;
                                       Montminy
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GLUCAGON.
GLUCAGON-36 (0)
GLUCAGON-LIKE 1
                                                                                                                                                                                                                                                                                                                                                                       Score 118;
Pred. No. 2
                                                                                                                                                                                                                                                                                                                                                                                                                          GLUCAGON-LIKE PEPT: 316287B7BAE1C8F7
                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                           Mismatches
                        M.R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           update)
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                                                                                                                                                                                                                                         122
                           Nucleotide and
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                                       Dee P.C.,
                                                                                                                                                                                                                                                                                                                                                                       DB 1;
.3e-10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (OXYNTOMODULIN).
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                                                                                                                                                                                                                                         ₽
                                                                                                                                                                                                                                                                                                                                                                                                                            PEPTIDE 2.
LC8F7 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                  Length 103
                                                                                                       Lophiidae; Lophius
                                       Habener J.F.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LIPIDS,
                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                     polypeptide (GRPP);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Euteleostomi;
Ranidae; Rana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OF.
                          corresponding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BY HOMOLOGY WITH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LANGERHANS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AND RAISES
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GLUC_ICTPU
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PEPTIDE
SEQUENCE
                                                                             TISSUE-Pancreas;
MEDLINE-87156787; PubMed-3030323;
Hoosein N.M., Mahrenholz A.M., Andrews P.C., Gurd Blological activities of catfish glucagon and glu
                                                                                                                                                                             Glucagon precursor (Fragment). Ictalurus punctatus (Channel catfish). Eukaryota; Metazoa; Chordata; Craniata; Actinopterygil; Neopterygil; Teleostei; Siluriformes; Ictaluridae; Ictalurus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PEPTIDE
PROPEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Glucagon
SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         [2]
PROCESSING.
TISSUE=Pancreas;
MEDLINE=85157536; PubMed=3838546;
Andrews P.C., Ronner P.;
                                                                                                                                                                                                                                          01-NOV-1986 (Rel. 03, Created)
01-MAR-1989 (Rel. 10, Last sequence up
01-NOV-1990 (Rel. 16, Last annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; V00632; CAA23905.1; -. PIR; A05150; GCAF2. HSSP; P01274; IGCN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              between the Swiss Institute of Bioinformatics and the EMBL outst
the European Bioinformatics Institute. There are no restrictions
use by non-profit institutions as long as its content is in
modified and this statement is not removed. Usage by and for con
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Peptides 7:331-339(1986).

-!- FUNCTION: PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, AND RAISES

-!- INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF LANGERHANS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "Specific glucagon-related peptides isolated from anglerfish are metabolic cleavage products of (pre)proglucagon-II.";
                                        SEQUENCE
                                                               Biochem.
                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRINTS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This SWISS-PROT entry is copyright. It is produced through a collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -!- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE=86286913; PubMed=3526301; Noe B.D., Andrews P.C.;
                                                                                                                                                                NCBI_TaxID=7998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro;
                                                                                                                                                                                                                                                                                                                                                               89
                                                                                                                                                                                                                                                                                                                                                                              1 HAEGTFTSDVSSYLEGQAAKEFIAWL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION
                                                                                                                                                                                                                                                                                                _ICTPU
                                                                                                                                                                                                                                                                                                                                                              HADGTYTSDVSSYLQDQAAKDFVSWL 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PF00123; hormone2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sm00070; GLUCA; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          family; Hormone; Cleavage on pair of basic residues;

1 21
22 49 GLICENTIN-RELATED POLYPEPTIDE.
52 80 GLUCAGON II.
83 86
89 119 GLUCAGON-LIKE PEPTIDE II.
                                                               Biophys.
                                                                                                                                                                                                                                                                                                                                                                        PS00260;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IPR000532; Glucagon.
0123: hormone2; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              22
52
83
89
122 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                STANDARD;
                                                                Res.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GLUCAGON;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                14171 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                           77.8%;
73.1%;
                                                                                                                                                                                                                                                                                                                                                                           Commun. 143:87-92(1987)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ņ
                                                                                                                                                                                                                                                                                                                                                                                                               Score 112; DB 1 Pred. No. 2e-09; 6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GLUCAGON-LIKE PEPTIDE II.; 5140AC47EF915519 CRC64;
                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                      26
                                                                                                                                                                                                                                                          update)
                                                                                                                                                                                                                                             update)
                                                                                                                                                                                                                                                                                                71
                                                                                                                                                                                                       Vertebrata; Euteleostomi;
                                                                                                                                                                                           Euteleostei;
                                                                                                                                                                                                                                                                                                A
                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 1;
                                                                                        glucagon-like
                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 122;
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                                                                                                                                                                                           Ostariophysi;
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Matches
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Glucagon
NON_TER
PEPTIDE
PEPTIDE
CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -
          insulin and pancreatic polypeptide.";

Gen. Comp. Endocrinol. 67:375-382(1987).

-!- FUNCTION: PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, AND RAISE

-!- INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF LANGERHANS

IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION.

-!- MISCELLANEOUS: X'S IN THE SEQUENCE WERE INCLUDED BY HOMOLOGY WI
                                                                                                                                                                                                                                                                                                                                                                                Glucagon precursor [Contains: Glucagon; Glucagon-36 (Oxyntomodulin); Glucagon-like peptide] (Fragment).

Lepisosteus spatula (Alligator gar) (Atractosteus spatula).

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Actinopterygii; Neopterygii; Semionotiformes; Lepisosteidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pfam; PF00123; hormone2; SMART; SM00070; GLUCA; 2
                                                                                                                                                                                                           "Isolation of alligator gar (Lepisosteus spatula) glucagon, oxyntomodulin, and glucagon-like peptide: amino acid sequen oxyntomodulin and glucagon-like peptide."; Gen. Comp. Endocrinol. 69:133-140(1988).
                                                                                                                                                                                                                                                                                MEDLINE-88196798; PubMed=3282974; Pollock H.G., Kimmel J.R., Ebner K.E.,
                                                                                                                                                                                                                                                                                                                                                                    Actinopterygii;
Lepisosteus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-MAR-1989 (Rel. 10, Created)
01-NOV-1990 (Rel. 16, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               P09566;
01-MAR-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HSSP; P01274; 1GCN.
                                                                                                                         Pollock H.G., Kimmel J. Lance V., Rawitch A.B.;
                                                                                                                                                                                                                                                                                                              TISSUE=Pancreas;
                                                                                                                                                                                                                                                                                                                            SEQUENCE OF 1-36 AND 45-78.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LEPSP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  InterPro;
                                                                                                            "Isolation and structures of alligator gar (Lepisosteus
                                                                                                                                                       MEDLINE=88030594; PubMed=3311873;
                                                                                                                                                                                 PRELIMINARY SEQUENCE
                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=7917;
                                                                                                                                                                                                                                                                     Lance
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                38
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      THE BLOOD SUGAR LEVEL.
INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS
IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATIO
MISCELLANEOUS: X'S IN THE SEQUENCE WERE INCLUDED
AMERICAN GOOSEFISH SEQUENCES.
SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FUNCTION: PROMOTES HYDROLYSIS OF GLYCOGEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LEPSP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A05166; GCIDC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HADGTYTSDVSSYLQEQAAKDFITWL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HAEGTFTSDVSSYLEGQAAKEFIAWL
                                                                                                                                                                                                                                                                     V., Rawitch A.B.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           family; Hormone.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PS00260;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IPR000532; Glucagon.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
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38
53
71
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GLUCAGON;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8173
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29
71
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76.9%;
                                                                                                                                        J.R., Hamilton
                                                                                                                                                                                    OF 1-29.
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  SEQUENCES
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GLUCAGON-LIKE PEPTIDE.
E -> D (IN REF. 2).
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Pred. No. 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         24688E79AD981A8F CRC64
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                                                                                                                                      J.W., Rouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              78
                                                                                                                                                                                                                                                                                   Hamilton J.W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 1;
.6e-09;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 71;
                                                                                                                                         J.B.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LIPIDS,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  엵
                 BY HOMOLOGY WITH
                                                                                                                                                                                                                                            sequences
                                                                                                                                                                                                                                                                                   Rouse
                                                                                                                                           Ebner
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                                                                                                               spatula)
                                                                       AND RAISES
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PEPTIDE
PEPTIDE
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SEQUENCE
                                                                        PEPTIDE
PEPTIDE
NON_TER
SEQUENCE
                                                                                                                                                                                                                   Purification and characterization of insulin and pepti from proglucagon and prosomatostatin from the fruit-eat pacu Piaractus mesopotamicus ";
Comp. Biochem. Physiol. 122B:127-135(1999).
-i-FUNCTION: PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPID THE BLOOD SUGAR LEVEL.
-i- INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF IN RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HSSP;
                                                                                                               Glucagon
NON_TER
                                                                                                                                                                                                                                                                                                                                                      Eukaryota; metazoa; Chordata; Craniata; Vertebrata; l
Actinopterygii; Neopterygii; Teleostei; Euteleostei;
Characiformes; Characidae; Serrasalminae; Piaractus.
                                                                                                                                                                                                                                                                                                                                                                                           Glucagon precursor
                                                                                                                                                                                                                                                                                                                                                                                                     30-MAY-2000
30-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pfam; PF00123; hormone2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PIR; S06339; GCGXA
                                                                                                                                                                                                                                                                                               TISSUE=Pancreas;
MEDLINE=99259587; PubMed=10327603;
de Lima J.A., Oliveira B., Conlon J.M.;
                                                                                                                                                                                                                                                                                                                             SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                   Piaractus mesopotamicus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SMART; SM00070; GLUCA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        InterPro; IPR000532; Glucagon.
                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=42528;
                                                                                                                                          PRINTS; PR00275; GLUCAGOI SMART; SM00070; GLUCA; 2
                                                                                                                                                             InterPro; IPR000532; Glucagon.
Pfam; PF00123; hormone2; 2.
                                                                                                                                                                                                            IN RESPONSE TO A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY
                                                                                                                                 PROSITE;
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                                                                                                                                                                                         OTHER FISH SEQUENCES.
SIMILARITY: BELONGS 1
HAEGTFTSDVSSYLEGQAAKEFIAWL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 P01274; 1GCN
                                                                                                                                                                                P01274; 1GCN
                           l Similarity
19; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
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                                                                                                                         family; Hormone
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                                                                                                                                  PS00260;
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AA;
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                            Conservative
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71
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78
8990
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73
                                     75.7%;
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GLUCAGON-36.
GLUCAGON-LIKE PEPTIDE
30106496271594E0 CRC64
                                     Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 110; DB 1;
Pred. No. 2.5e-09;
5; Mismatches 2
                                                                         F66A3CA2DD9806C5 CRC64
                                                                                             GLUCAGON-LIKE PEPTIDE.
                                                                                                      GLUCAGON
                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                            PRT;
                                                                                                                                                                                           GLUCAGON FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              26
         26
                            Mismatches
                                     109;
No. 3
                                                                                                                                                                                                                                                                                                                                                                                                                 update)
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                                                                                                                                                                                                              WERE
                                     DB 1;
.2e-09;
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                                                                                                                                                                                                                                                                               and peptides fruit-eating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 78;
                                              Length 71;
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                              Indels
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; Ostariophysi;
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                                                                                                                                                                                                                                 LANGERHANS
                                                                                                                                                                                                               HOMOLOGY
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Search completed: May 20, 2002, 09:36:37 Job time: 96 sec

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Result
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Maximum Match 100%
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| 47 | 47.5 | 48 | 48 | 48 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 50 | 50 | 50.5 | 51 | 51 | 51 | 52 | 52 | 52 | 52 | 53 | 54.5 | 58 | 58 |
| | | | | 33.3 | | | | 34.0 | 34. | | 34. | | | | | | | | 35.4 | 35.4 | | | 36.1 | 6. | 5 | 37.8 | 40.3 | 40.3 |
| 155 | 326 | 575 | 171 | 28 | 835 | 786 | 634 | 589 | 576 | 571 | 505 | 504 | 315 | 175 | 331 | 89 | 372 | 867 | 810 | 352 | 175 | 173 | 171 | 138 | 172 | 426 | 171 | 169 |
| 17 | 16 | 9 | 10 | 13 | υ | Ç, | ω | G | σ | σı | 11 | 11. | 11 | 13 | σ | 13 | 10 | 4 | 4 | G | 13 | 13 | 13 | 13 | 13 | 16 | 11 | 4 |
| Q9UYL7 | Q55684 | Q38545 | Q9FGY5 | Q9PRN8 | Q9N5B8 | Q9N5B7 | Q9HEE5 | Q9N5B9 | Q9віJ4 | Q966F0 | P97770 | Q99M45 | Q9D3P0 | Q98TU3 | 018301 | Q98SP6 | Q9XFW9 | Q9UFX9 | Q9NTW8 | Q9XXQ1 | Q90xz4 | Q98SP5 | Q9PUF8 | Q98SP4 | Q9DE29 | P71006 | Q9D2Z7 | Q96QK3 |
| | Q55684 synechocyst | Q38545 bacteriopha | Q9fgy5 arabidopsis | Q9prn8 carassius a | Q9n5b8 caenorhabdi | Q9n5b7 caenorhabdi | Q9hee5 neurospora | Q9n5b9 caenorhabdi | Q9bij4 caenorhabdi | Q966f0 caenorhabdi | P97770 mus musculu | Q99m45 mus musculu | | Q98tu3 brachydanio | caenor | Q98sp6 anas platyr | 9 cice | Q9ufx9 homo sapien | homo | Q9xxq1 caenorhabdi | | oncorhyn | | | Q9de29 brachydanio | baci | | Q96qk3 homo sapien |

ALIGNMENTS

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Q91410
Q91410;
01-NOV-1996
01-NOV-1996
01-DEC-2001
PROGLUCAGON.
                                                                                                                                                                                                                                       Submitted (SEP-2000) to the EMBL/GenBank/DDBJ databases EMBL; AF308439; AAL09425.1; -. SEQUENCE 180 AA; 21114 MW; 80F66941AFC324FD CRC64;
                                                                                                                                                                                                                                                                                                                                       Canis familiaris (Dog).
Canis familiaris (Dog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis.
NCBI_TaxID=9615;
                                                                                                                                                                                                                                                                                                                                                                                        01-DEC-2001 (Tremblrel. 19, 01-DEC-2001 (Tremblrel. 19, 01-DEC-2001 (Tremblrel. 19, PREPROGLUCAGON.
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Irwin D.M.;

CDNA cloning of proglucagon from the stomach and pancreas
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Local Similarity 100.0%; ;
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Pred. No. 4.2e-1
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Best Local
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             PROSITE; PS00260; GLUCAGON; Glucagon family; Hormone; C
                                      PRINTS; PR00275; GLUCA; SMART; SM00070; GLUCA;
                                                              -!- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
EMBL; U77612; AAB51129.1; -.
EMBL; U77611; AAB51128.1; -.
HSSP; P01274; IGCN.
InterPro; IPR000532; Glucagon.
Pfam; PF00123; hormone2; 3.
                                                                                                                                          -!- FUNCTION: PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, AND RAISES
THE BLOOD SUGAR LEVEL (BY SIMILARITY).
-!- ALTERNATIVE PRODUCTS: 2 ISOFORMS; LPII (SHOWN HERE) AND LPI; ARE
PRODUCED BY ALTERNATIVE SPLICING.
-!- TISSUE SPECIFICITY: ISOFORM LPII IS EXPRESSED IN BOTH PANCREAS AN
-!- INTESTINE. EXPRESSION OF ISOFORM LPI IS RESTRICTED TO THE
INTESTINE. EXPRESSION OF ISOFORM LPI IS RESTRICTED TO THE
PANCREAS. NEITHER ISOFORM IS DETECTED IN SALIVARY GLAND.
-!- INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF LANGERHANS IN
RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION.
                                                                                                                                                                                                                                                                                                                                                                                                                                                     012956; 012955;
01-JUL-1997 (TrEMBLrel.
01-JUL-1997 (TrEMBLrel.
01-JUN-2001 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                      TISSUE=INTESTINE, AND PANCREAS; MEDLINE=97172477; PubMed=9020121;
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Pfam; PF00123; hormone2; 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Trout and chicken proglucagon: alternative splicing transcripts encoding glucagon-like peptide 2."; Mol. Endocrinol. 9:267-277(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE .... MEDLINE=95295739; Pui
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gallus gallus (Chicken).

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                            Heloderma suspectum
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                                                                                                                                                                                                                                                                                                                                                                                                   Lepidosauria; Squamata;
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P01274; IGCN.
                                                   PR00275;
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splicing
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                                                   GLUCAGON.
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ata; Scleroglossa; Anguimorpha; F
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88.9%;
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17,
            Cleavage on
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.4e-12;
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            basic residues;
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1 HAEGTFTSDVSSYLEGQAAKEFIAWLVK

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                     Query Match
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                                                                                                                                                                                                                                                                                                                       "The Xenopus proglucagon gene encodes novel GLP-1-
insulinotropic properties.";
Proc. Natl. Acad. Sci. U. S. A. 94:7915-7920(1997).
-1- FUNCTION: PROMOTES HYDROLYSIS OF GLYCOGEN AND
THE BLOOD SUGAR LEVEL.
-1- ALTERNATIVE PRODUCTS: 2 ISOPORMS; 1 (SHOWN HER PRODUCED BY ALTERNATIVE SPLICING.
-1- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
EMBL, APROV4432, AAB65660.1; -.
HSSP; P01274; 1GCN.
InterPro; IPRO00532; Glucagon.
Pfam; PF00123; hormone2; 5.
PRINTS; PR00275; GLUCAGON.
SMART; SM00070; GLUCA; 5.
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O42143;
O1-JAN-1998 (TrEMBLrel. 05, Created)
O1-JAN-1998 (TrEMBLrel. 05, Last sequence update)
O1-JAN-1998 (TrEMBLrel. 17, Last annotation update)
O1-UN-2001 (TrEMBLrel. 17, Last annotation update)
GLUCAGON I PRECURSOR [CONTAINS: GLUCAGON; GLUCAGON-LIKE PEPTIDE 18 (GLP-1B); GLUCAGON-LIKE PEPTIDE 18 (GLP-1B); GLUCAGON-LIKE PEPTIDE 2 (GLP-1C); GLUCAGON-LIKE PEPTIDE 2 (GLP-2)].
Xenopus laevis (African clawed frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                      PEPTIDE
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SEQUENCE
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SIGNAL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=97368292; PubMed=9223287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A., AND ALTERNATIVE SPLICING TISSUE=PANCREAS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=8355,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea;
Xenopodinae; Xenopus.
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SM00070; GLUCAGON; 5.
E; PS00260; GLUCAGON; 5.
gon family; Hormone; Signal; Clea...
por family; Alternative splicing.
POTENTIAL.
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19; Conser
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85.2%;
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GRPP (GLICENTINE RELATED F
GLUCAGON.

GLUCAGON-LIKE PEPTIDE 1.

GLUCAGON-LIKE PEPTIDE 2.

D -> E (IN ISOFORM LPI).

MISSING (IN ISOFORM LPI).
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                     Score 114; DB 13; Pred. No. 2.7e-09;
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Pred.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           94:7915-7920(1997)
                                                                                                      544F7BBC20AF872C
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  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
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                                                                                                                                                                                                                                                                                       Cleavage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              126;
No. 2.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 novel GLP-1-like
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.8e-11;
                                                                                                                         PEPTIDE
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SOFORM 2)
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                                                                                                                                                                                                                                                                                       pair of basic
                                                                                                      CRC64;
                                        Length 266;
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18
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AND RAISES
0;
                                                                                                                                                                                                                                                                                       residues
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Gaps
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0;
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RESULT
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                Q91971 PRELIMINARY; PRT; 178 AA.
Q91971; Q91408; Q91188; Q92169;
Q1-NOV-1996 (TREMBLrel. 01, Created)
Q1-NOV-1996 (TREMBLrel. 01, Last sequence update)
Q1-JUN-2001 (TREMBLrel. 17, Last annotation update)
Q1CJUCAGON I PRECURSOR.
Oncorhynchus mykiss (Rainbow trout) (Salmo gairdneri).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eutactinopterygii; Neopterygii; Teleostei; Euteleostei;
Protacanthopterygii; Salmoniformes; Salmonidae; Oncorh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q91409 PRELIMINARY; PRT; 72 AA.
Q91409; Q91232;
Q1-NOV-1996 (TrEMBLrel. Q1, Created)
Q1-NOV-1996 (TrEMBLrel. Q1, Last sequence update)
Q1-DEC-2001 (TrEMBLrel. 19, Last annotation update)
PROGLUCAGON (FRAGMENY).
Oncorhynchus tschawytscha (Chinook salmon) (King salf Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; lactinopterygii; Neopterygii; Teleostei; Euteleostei; Protestata; Neopterygii; Neopterygii; Teleostei; Euteleostei;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL;
                                                                                                                                                                                    - i - Mo1
                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.,
TISSUE=DISTAL SMALL
MEDLINE=95295739; Pu
                                                                                                                                                                                                       "Trout and chicken proglucagon: alternative transcripts encoding glucagon-like peptide Mol. Endocrinol. 9:267-277(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Trout and chicken proglucagon: alternative splicing transcripts encoding glucagon-like peptide 2."; mol. Endocrinol. 9:267-277(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A. MEDLINE=95295739;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Protacanthopterygii;
NCBI_TaxID=74940;
                                                                               -
                                                                                                                                +
                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=8022;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRINTS; PR00275; GLUCAGON. SMART; SM00070; GLUCA; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HSSP;
                                                                                                                                                                                                                                                                                          Irwin D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Irwin D.M., Wong
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 HAEGTFTSDVSSYLEGQAAKEFIAWL
          FUNCTION: PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, AND THE BLOOD SUGAR LEVEL (BY SIMILARITY).

ALTERNATIVE PRODUCTS: 2 ISOFORMS; INTESTINAL (SHOWN HERE) PANCREATIC; ARE PRODUCED BY ALTERNATIVE SPLICING. INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF LANGER RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION.

SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        L; S78474; AAD14283.1; -.
L; U19920; AAC59670.1; -.
P; P01274; 1GCN.
erPro; IPR000532; Glucagon.
m; PF00123; hormone2; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HADGTYTSDVSTYLQDQAAKDFVSWL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               l Similarity
18; Conser
                                                                                                                                                                                                                                                                                       M., Wong J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PS00260; GLUCAGON; UNKNOWN_1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
  AAC59667.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     J.;
                                                                                                                                                                                                                                                                                                               ., AND ALTERNATIVE SPLICING LL INTESTINE, AND PANCREAS; Pubmed=7776976;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PubMed=7776976;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8293 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Salmoniformes; Salmonidae; Oncorhynchus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     75.7%;
69.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 109; DB
Pred. No. 3.3e
7; Mismatches
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                                                                                                                                                                                                                                alternative splicing ike peptide 2.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          64
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Vertebrata; Eutel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 13;
.3e-09;
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                                                                         LANGERHANS
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PIX WERE REPORTED TO COLOR OF THE PROPERTY OF 
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Q91189
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L Mol. Endocrinol. 9:267-277(1995).

C -!- FUNCTION: PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, A CONTROL OF THE BLOOD SUGAR LEVEL (BY SIMILARITY).

C -!- ALTERNATIVE PRODUCTS: 2 ISOFORMS; INTESTINAL (SHOWN HER PANCREATIC; ARE PRODUCED BY ALTERNATIVE SPLICING.

C -!- INDUCTION: PRODUCED IN THE A CELLS OF THE ISLETS OF LAN RESPONSE TO A DROP IN BLOOD SUGAR CONCENTRATION.

C -!- SIMILARITY: BELONGS TO THE GLUCAGON FAMILY.

REMBL; U19914; AAC59668.1; -.

R EMBL; U19915; AAC60210.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
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Best Local
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O91189; O92168;
O1-NOV-1996 (TIEMBLIEL 01, C
O1-NOV-1996 (TIEMBLIEL 01, I
O1-JUN-2001 (TIEMBLIEL 17, I
GLUCAGON II PRECURSOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; U19917; AAC59669.1;
EMBL; U19918; AAC60213.1;
EMBL; U19919; AAC60213.1;
EMBL; U19918; AAC60213.1;
EMBL; U19918; AAC60213.1;
EMBL; S78475; AAB34505.1;
EMBL; S78473; AAB34504.2;
                    PROSITE; PS00260; GLUCAGON; UNKNOWN_2. Glucagon family; Hormone; Cleavage on patternative splicing; Multigene family
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.,
TISSUE=DISTAL SMALL
MEDLINE=95295739; Pu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Oncorhynchus mykiss (Rainbow trout) (Salmo gairdneri
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Actinopterygli; Neopterygli; Teleostel; Euteleostel;
Protacanthopterygli; Salmoniformes; Salmonidae; Onco
NCBI_TaxID=8022;
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VARSPLIC
SEQUENCE
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PEPTIDE
                                                                                             Pfam; PF00123; hormone2; 3
PRINTS; PR00275; GLUCAGON.
SMART; SM00070; GLUCA; 3.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro; IPR000532; Glucagon InterPro; IPR000532; Glucagon 3.
                                                                                                                                                                        InterPro; IPR000532; Glucagon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Irwin D.M., Wong J.;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRINTS; PR00275; GLUCAGON. SMART; SM00070; GLUCA; 3.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 HAEGTFTSDVSSYLEGQAAKEFIAWL 26
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85
137
124
178
splicing; Multigene family
1 ? POTENTIAL
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80
120
169
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20034
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69.2%;
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GLUCAGON-LIKE PEPTIDE 1.
GLUCAGON-LIKE PEPTIDE 2.
GLUCAGON-LIKE PEPTIDE 2.
MISSING (IN PANCREATIC ISO)
MYSCF6980CF2A9D58E CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Last annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Last sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 109;
Pred. No. 9.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          POTENTIAL
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.6e-09;
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                                                 of basic residues; Signal;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       update)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Oncorhynchus
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LIPIDS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                residues;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 generates
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Q9PUR1
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                                                                                                                                                                        Query Match
Best Local S
Matches 18
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Best L
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042144;
01-JAN-1998
                Q9PUN1
                                                                                                                                                                                                                                                           PEPTIDE
PEPTIDE
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 U1-JAN-1998 (TrEMBLrel. 05, Created)
01-JAN-1998 (TrEMBLrel. 05, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
GLUCAGON II PRECURSOR (CONTAINS: GLUCAGON; GLUCAGON-LIKE PEPTIDE 1A
(GLP-1A); GLUCAGON-LIKE PEPTIDE 1B (GLP-1B); GLUCAGON-LIKE PEPTIDE:
(GLP-1C)].
                                                                                                                                                                                                                                                                                                                                                                             PROSITE; PS00260; GLUCAGO Glucagon family; Hormone;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  InterPro; IPR000532; Glucagon. Pfam; PF00123; hormone2; 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "The Xenopus proglucagon gene encodes insulinotropic properties,"; Proc. Natl. Acad. Sci. U.S.A. 94:7915-i- FUNCTION: PROMOTES HYDROLYSIS OF COMMENT OF CO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PEPTIDE
PEPTIDE
PEPTIDE
PEPTIDE
VARSPLIC
                                                                                                                                                                                                                                                                                                                                                SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                     SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                    PRINTS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -!- SIMILARITY: BELONGS TO THE EMBL; AF004433; AAB65661.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Irwin D.M., S: Wheeler M.B.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TISSUE=PANCREAS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Amphibia; Batrachia; Xenopodinae; Xenopus.
                                                                                                                                                                                                                                                                                                              PEPTIDE
                                                                                                                                                                                                                                                                                                                            PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=97368292; PubMed=9223287;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE
                                                                                                       180
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Local Similarity by...
18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                90
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                                                                                                   HAEGTFTNDMTNYLEEKAAKEFVGWLI
                                                                                                                     HAEGTFTSDVSSYLEGQAAKEFIAWLV 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HADGTYTSDVSTYLQDQAAKDFVSWL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    P01274;
                                                                                                                                                                                                                                                                                                                                                                                                              ; PR00275; GLUCAGON SM00070; GLUCA; 4.
                                                                                                                                                                    Similarity 66.7
18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 laevis (African clawed frog)
                                                                                                                                                                                                                                                                                                                                                                 family.
                                                                                                                                                                                                                                                        142
180
219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Metazoa; Chordata; Craniata;
4
                  PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Satkunarajah M.,
                                                                                                                                                                                                                                                                                                              53
97
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85
137
124
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81
13
17
211
25271 MW;
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80
120
169
178
19998 .
                                                                                                                                                                                                                                                                                                                                                                                                                              GLUCAGON.
                                                                                                                                                                                                                                                                                                                                                                        GLUCAGON; 3.
Hormone; Signal;
                                                                                                                                                                                     75.7%;
66.7%;
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69.2%;
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                                                                                                                                                                                                                                                      GLUCAGON.

GLUCAGON-LIKE PEPTIDE 1A.

GLUCAGON-LIKE PEPTIDE 1B.

GLUCAGON-LIKE PEPTIDE 1C.

GLUCAGON-LIKE PEPTIDE 1C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GRPP (GLICENTINE RELATED POLYPEPT)
GLUCAGON-LIKE PEPTIDE 1.
GLUCAGON-LIKE PEPTIDE 2.
GLUCAGON-LIKE PEPTIDE 2.
MISSING (IN PANCREATIC ISOFORM).
MW; E89D73866CD91C66 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7;
                                                                                                                                                                                        Pred.
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Pred. No. 9.6e-09;
7; Mismatches 1;
                                                                                                                                                                                                     Score
                                                                                                                                                                                                                                                                                                                                             POTENTIAL.
                  PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        94:7915-7920(1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GLUCAGON FAMILY
                                                                                                                                                                    ed. No. 1.2
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Y., Brubaker P.L.,
                                                                                                                                                                                   109;
                                                                                                                                                                                                                                                                                                                                                                             Cleavage
                  160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GLYCOGEN AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         219
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        peptides
                                                                                                                                                                                                       219;
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                                                                                                                                                                    0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RAISES
                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10
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Best Local Similarity
Matches 15; Conser
(1)
SEQUENCE FROM N.A.
SEQUENCE FROM N.A.
MEDLINE=99425190; PubMe
Terranton F., Zecchin E
                                                                                                                                                                                                                                                      Q9DDE6;
01-MAR-2001
                                                                                          Brachydanio rerio (Zebrafish) (Ze
Eukaryota; Metazoa; Chordata; Cra
Actinopterygii; Neopterygii; Tele
Cypriniformes; Cyprinidae; Danio.
NCBI_TaxID=7955;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PEPTIDE
PEPTIDE
SEQUENCE
                                                                                                                                                                                      GCG OR GLU.
                                                                                                                                                                                                     GLUCAGON POLYPROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PEPTIDE
                                                                                                                                                                                                                                          01-MAR-2001
                                                                                                                                                                                                                                                                                             Q9DDE6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TISSUE-INTESTINE;

MEDLINE-20022986; PubMed-10555286;

Irwin D.M., Huner O., Youson J.H.;

"Lamprey proglucagon and the origin
Mol. Biol. Evol. 16:1548-1557(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PROSITE; PS00260; GLUCAGO; GLUCAGO; GLUCAGO; family; Hormone; Multigene family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRINTS; PR00275; GLUCAGON. SMART; SM00070; GLUCA; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conlon J.M., Nielsen P.F., Youson "Primary structures of glucagon autrom the intestine of the parasit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pfam; PF00123; hormone2; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HSSP; P01275;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -I- SIMILARITY: BELONGS TO EMBL; AF159707; AAF09186.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -!- FUNCTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          marinus.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=94010172; PubMed=8405897;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TISSUE-INTESTINE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE OF 43-71
                                                                                                                                                                                                                                                                                                                                                                                      82
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                                                                                                                                                                                                                                                                                                                                                                                                     1 HAEGTFTSDVSSYLEGQAAKEFIAWLVK
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THE BLOOD SUGAR LEVEL.
                                                                                                                                                                                                                                                                                                                                                                                      HADGTFTNDMTSYLDAKAARDFVSWLAR 109
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43
82
130
160
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                                                                                                                                                                                                                      (TrEMBLrel.
                                                                                                                                                                                                                                                        (TrEMBLrel.
                                                                                                                                                                                                                                                                                             PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                         PubMed=10495291;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GLUCAGON; 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AND 82-113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                22
71
113
160
18042
   E., Bortolussi M.;
pancreatic hormone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              70
53
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HYDROLYSIS OF GLYCOGEN AND
                                                                                                                                                                                                                    16,
19,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Signal;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ₩.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cagon and glucagon-like parasitic phase lamprey
                                                                                                                                                                                                                                                                                                                                                                                                                                                         11;
                                                                                                                                                                                                                      Last
Last
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              POTENTIAL.
GLUCAGON-LIKE PEPTIDE 1
GLUCAGON-LIKE PEPTIDE 2
GLUCAGON-LIKE PEPTIDE 2
GLUCAGON-LIKE PEPTIDE 2
CRC6
                                                                                                                                                                                                                                                         Created)
                                                                                                                             ) (Zebra danio).; Craniata; Vert
Teleostei; Eute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score
Pred.
                                                                                                                                                                                                                                                                                           PRT;
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     hormone-expressing cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                      sequence update) annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                     28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Cleavage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            J.H.;
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                                                                                                                                                                                                                                                                                           121
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                                                                                                                               Euteleostei;
                                                                                                                                            Vertebrata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13;
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TIDE 2.
CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
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Petromyzon
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ^{\rm of}
                                                                                                                                              Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hyperoartia;
                                                                                                                             Ostariophysi;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         basic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           160;
     'n
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Best Local S
Matches 19
                                                                                     Query Match
Best Local S
Matches 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                zebrafish embryo.";
Mech. Dev. 87:217-221(1999).
EMBL; AJI33697; CAC20108.1; -.
HSSE; PO1274; IGCN.
ZFIN; ZDB-GENE-010219-1; gcg.
InterPro; IPR000532; Glucagon.
Pfam; PF00123; hormone2; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
GLUCAGON PRECURSOR [CONTAINS: GLUCAGON-29; GLUCAGON-33;
PEPTIDE] (FRAGMENTS).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CHAIN
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conlon J.M., Hazon N., Thim L.; "Primary structures of peptides derived from proglucagon isolated the pancreas of the elasmobranch fish, Scyliorhinus canicula."; peptides 15:163-167(1994)
-!- FUNCTION: PROMOTES HYDROLYSIS OF GLYCOGEN AND LIPIDS, AND RAIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Scyliorhinus canicula (Spotted dogfish)
Eukaryota; Metazoa; Chordata; Craniata;
Elasmobranchii; Galeomorphii; Galeoidea;
Scyliorhinidae; Scyliorhinus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q9PRW9; Q9PRX0; Q9PRW8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRINTS; PR00275; GLUCAGON. SMART; SM00070; GLUCA; 2.
                                                                                                                                                                                                  PEPTIDE
SEQUENCE
                                                                                                                                                                                                                                                                                                                               Pfam; PF00123; hormone2; 2
PRINTS; PR00275; GLUCAGON.
SMART; SM00070; GLUCA; 2.
PROSITE; PS00260; GLUCAGON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TISSUE-PANCREAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PROSITE;
                                                                                                                                                                                                                                                                                                               Glucagon
                                                                                                                                                                                                                                                                                                                                                                                                                                              HSSP; P01274; 1GCN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=94286411; PubMed=8015974;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=7830;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Polyprotein.
                                                                                                                                                                                                                                                                   PEPTIDE
                                                                                                                                                                                                                                                                                          PEPTIDE
                                                                                                                                                                                                                                              NON_CONS
                                                                                                                                                                                                                                                                                                                                                                                                                         InterPro; IPR000532; Glucagon.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity 73... hes 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SIMILARITY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FUNCTION: PROMOTES HYDROLYSIS THE BLOOD SUGAR LEVEL.
                                       HAEGTFTSDVSSYLEGQAAKEFIAWLV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HAEGTYTSDVSSYLQDQAAQRFVARL 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HAEGTFTSDVSSYLEGQAAKEFIAWL
  HSEGTFTSDYSKYMDNRRAKDFVQWLM
                                                                                                                                                                                                                         n family; Hormone.
1 29
1 33
3 34
62
                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PS00260; GLUCAGON;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 49
88
121 '
                                                                                                                                                                                                    62
                                                                                       Conservative
                                                                                                                                                                                                    Α,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ĀĀ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BELONGS TO THE GLUCAGON FAMILY.
                                                                                                                                                                                                                                                                                                                                   GLUCAGON; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            79
121
13537
                                                                                                                                                                                                    7270 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       68.1%;
73.1%;
                                                                                                          66.0%;
55.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ₩;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4;
                                                                                   Score 95; DB
Pred. No. 3.9e
7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 98;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GLUCAGON.
GLUCAGON-LIKE PEPTIDE 1.
; A85385F690DA180F CRC64;
                                                                                                                                                                                                GLUCAGON-LIKE PEPTIDE.
C5FF487C12C69CD1 CRC64;
                                                                                                                                                                                                                                                                GLUCAGON-29.
GLUCAGON-33.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Galeoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
  27
                                         27
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Vertebrata; Chondri
                                                                                                                                 DB 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Carcharhiniformes;
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                                                                                                            9e-07;
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                                                                                                                            Length 62
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                                                                                       Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AND RAISES
                                                                                     0;
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                                                                                     Gaps
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RESULT
Q9DG43
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Q9PURO
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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                          MEDLINE=20022986; PubMed=10555286; Irwin D.M., Huner O., Youson J.H.; Irwin D.M., Huner O., Youson J.H.; "Lamprey proglucason and the origin of Mol. Biol. Evol. 16:1548-1557(1999).
-i- FUNCTION: PROMOTES HYDROLYSIS OF OTHE BLOOD SUGAR LEVEL.
-i- SIMILARITY: BELONGS TO THE GLUCAGO
                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-MAY-2000
01-MAY-2000
01-DEC-2001
GLUCAGON II
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-MAR-2001
01-MAR-2001
01-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                               Petromyzon Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CHAIN
NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q9DG43;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ambloplites rupestris.
Eukaryota; Metazoa; Chordata; Craniata;
Actinopterygil; Neopterygil; Teleostel;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pfam; PF00123; hormone2; 2
PRINTS; PR00275; GLUCAGON.
SMART; SM00070; GLUCA; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Rock Bass Proglucagon.";
Submitted (SEP-1999) to the
EMBL; AF190499; AAG16778.1;
HSSP; P01274; IGCN.
                                                                                              -!- SIMILARITY: BELONGS TO EMBL; AF159708; AAF09187.1; HSSP; P01275; 1BH0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A. Al-Mahrouki A.A., Irwin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Acanthomorpha; Acanthopterygii; Centrarchidae; Ambloplites.
                   PRINTS; PRO0275; GLUCA; SMART; SM00070; GLUCA;
                                                           InterPro; IPR000532; Glucagon Pfam; PF00123; hormone2; 2.
                                                                                                                                                                                                                                                                                             TISSUE-INTESTINE;
                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=7757;
                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa;
Petromyzontiformes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q9PUR0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q9PUR0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NON_TER
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro; IPR000532; Glucagon.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=109273;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PROGLUCAGON (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                           (GLP)]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12
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| HSQGTFTNDYTNYLEDRQAQDFIRWLM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 HAEGTFTSDVSSYLEGQAAKEFIAWLV 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                  marinus (Sea lamprey).
Metazoa; Chordata; Cra
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        96
                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRECURSOR [CONTAINS: GLUCAGON; GLUCAGON-LIKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (TremBLrel. 13, Created)
(TremBLrel. 13, Last sequence update)
(TremBLrel. 19, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (TrEMBLrel.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRELIMINARY;
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98
98
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                                     GLUCAGON.
  GLUCAGON;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              >29
>70
>96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11225 MW;
                                                                                                                                                                                                                                                                                                                                                                              Petromyzontidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61.1%;
51.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       16,
16,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         D.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GLUCAGON-LIKE |
GLUCAGON-LIKE |
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 88;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                  Craniata; Vertebrata; Hyperoartia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Youson J.H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6435033EBDDC00CE CRC64;
                                                                                                                                              GLUCAGON FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percomorpha;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
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                                                                                                                                                                                                                               of
                                                                                                                                                                                        GLYCOGEN AND
                                                                                                                                                                                                                                                                                                                                                                                Petromyzon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        120
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                                                                                                                                                                                                                             glucagon-like peptides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7.7e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Vertebrata; Euteleostomi;
Euteleostei; Neoteleostei;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 96;
                                                                                                                                                                                        LIPIDS, AND RAISES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
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Ra Alzawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,

Ra Alzawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,

Ra Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,

Ra Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,

Ra Fleischmann W., Gaasterland T., Gissi C., King B., Kochiwa H.,

Ra Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,

Ra Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,

Ra Kuehl P., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,

Ra Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,

Ra Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,

Ra Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,

Ra Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,

Ra Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,

Iyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,

Ra Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,

Ra Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,

Ra Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,

Sasaki H., Toyo-oka K., Wang K.H., Weitz C., Whittaker C., Wilming L.,

Ra Hayashizaki Y., Soshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,

Ra Hayashizaki Y.,
                                                            Query Match
Best Local S
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PEPTIDE
SEQUENCE
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Multigene
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                             Pfam; PF00123; hormone2; SMART; SM00070; GLUCA; 1.
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                                                                                                                                                                                                                                                            HSSP; P01274;
                                                                                                                                                                                                                                                                             EMBL; AK008525; BAB25720.1;
                                                                                                                                                                                                                                                                                            Nature 409:685-690(2001).
                                                                                                                                                                                                                                                                                                                              Hayashizaki Y.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Kawai J., Shinagawa A., Shibata K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GASTRIC INHIBITORY POLYPEPTIDE (FRAGMENT).
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                                                                                                                                                                           PROSITE;
                                                                                                                                                                                                                                                                                                           "Functional annotation of a full-length mouse cDNA collection.";
                                                                                                                                                                                                                               [nterPro;
30
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                                                                                                                                                                                                                        ); P01274; 1GCN.
MGI:107504; Gip.
xPro; IPR000532; Glucagon.
                            HAEGTFTSDVSSYLEGQAAKEFIAWLV 27
YAEGTFISDYSIAMDKIRQQDFVNWLL 56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                l Similarity
13; Conserv
                                                                            Similarity
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                                                                                                                                                                         PS00260; GLUCAGON; 1
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                                                            41.0%;
nilarity '40.7%;
Conservative
                                                                                                                                            130 AA;
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89
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120
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48.1%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Last sequence update)
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                                                            Score 59; DB
Pred. No. 0.31
7; Mismatches
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Pred. No.
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GLUCAGON-LIKE PEPTIDE.
; FBDE667B96E198D8 CRC64;
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                                                                                                                                              95B3B6E91E2A7992 CRC64;
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Konno H., Adachi J., Fukuda
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Search completed: May Job time: 129 sec

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RA Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,
RA Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
Ra Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,
Ra Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
RA Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
RA Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,
RA Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
RA Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,
RA Brownstein M.J., Bult C., Feletcher C., Fujita M., Gariboldi M.,
ROUTONE P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,
RA Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,
Ra Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,
RA Suzuki H., Toyo-oka K., Wang K.H., Weitz C., Whittaker C., Wilming L.,
Na Hayashiyaki Y., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
Hayashiyaki Y., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
                                                                            Matches
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Best Local
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Q9D887;
01-JUN-2001 (TrEMBLTel. 1
01-JUN-2001 (TrEMBLTel. 1
01-DEC-2001 (TrEMBLTel. 1
                                                                                                                                                                                           Hayashizaki Y.;
Hayashizaki Y.;
"Functional annotation of a full-length mouse cDNA collection.";
Nature 409:685-690(2001).
EMBL; AK008308; BAB25592:1; -
HSSP; P01274; IGCN.
MGD; MGI:107504; GICN.
MGD; MGI:107504; GIC.
InterPro: IPR000532; Glucagon.
Pfam; PF00123; hormone2; 1.
SMART; SM00070; GLUCA; 1.
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Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
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                                                                                                                                                                 PROSITE; PS00260; GLUCAGON; 1. SEQUENCE 144 AA; 16389 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE-21085660; PubMed-11217851;
Kawai J., Shinagawa A., Shibata K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=10090;
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44 YAEGTFISDYSIAMDKIRQQDFVNWLL 70
                                     1 HAEGTFTSDVSSYLEGQAAKEFIAWLV 27
                                                                                           Similarity
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                                                                            Conservative
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40.7%;
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Last sequence
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                                                                                           Score 59; I
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                                                                                                                                                                     36E618665D4DA8C3 CRC64;
                                                                          Mismatches
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Fukuda S.,
manaka I.,
Saito R.,
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